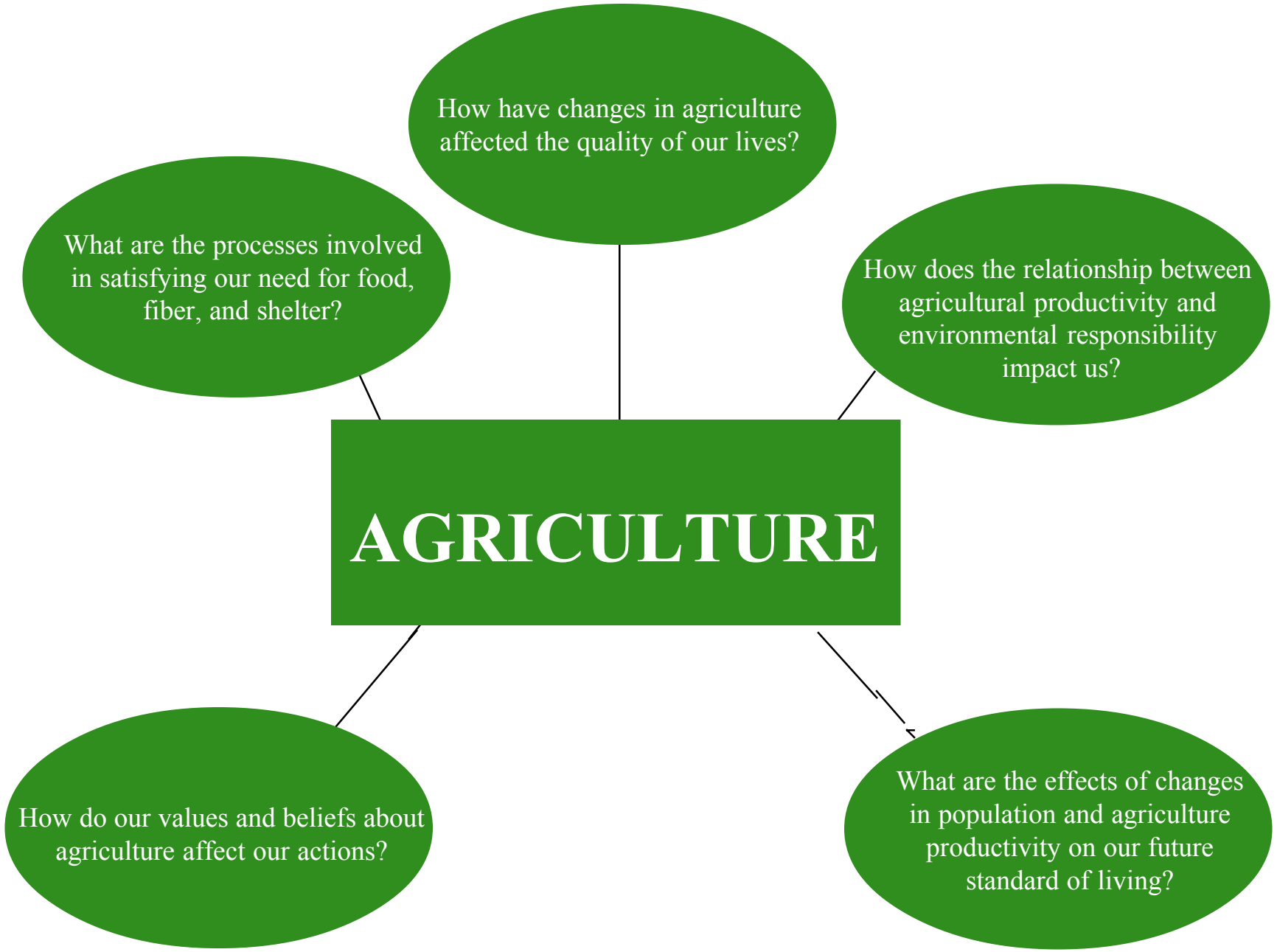
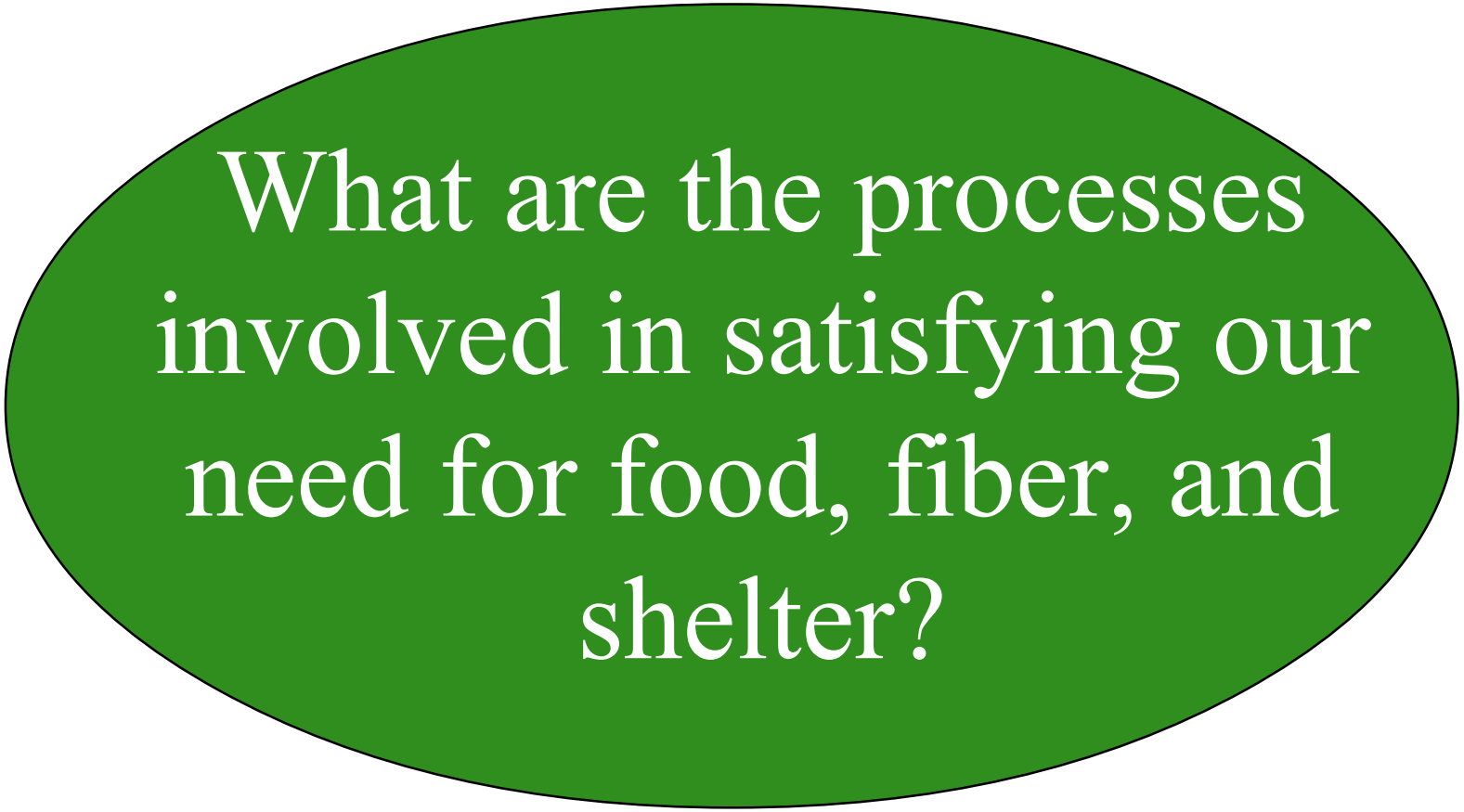

How have changes in agriculture affected the quality of our lives?
What are the processes involved in satisfying our need for food, fiber, and shelter?
How does the relationship between agricultural productivity and environmental responsibility impact us?
AGRICULTURE
How do our values and beliefs about agriculture affect our actions?
What are the effects of changes in population and agriculture productivity on our future standard of living?


What are the processes involved in satisfying our need for food, fiber, and shelter?

What are the processes involved in satisfying our need for food, fiber, and shelter?

Academic Expectations	Correlations to the Program of Studies	Sample Activities
2.1 Scientific Ways of Thinking and Working	**SCIENCE** **Students will** **Scientific Inquiry** ♦ identify and refine questions that can be answered through scientific investigations combined with scientific information. ♦ use appropriate equipment (e.g., barometer), tools (e.g., meter sticks) techniques (e.g., computer skills), technology (e.g., computers), and mathematics in scientific investigations. ♦ use evidence (e.g., computer models), logic, and scientific explanations. ♦ design and conduct different kinds of scientific investigations to answer different kinds of questions. ♦ communicate (e.g., write, graph) designs, procedures, and results of scientific investigations. ♦ review and analyze scientific investigations and explanations of other students. **All *Programs of Studies* scientific inquiry bullets are included in this guiding question.**	**BANKING ON SEEDS** ♦ explore the critical role that seeds have played through history. Compare the use of seeds by people in the past, present, and in the future. Create a scientific experiment that involves labeling seed parts, gathering, planting, and storing seeds for a seed bank. **BUZZY BUZZY BEE** ♦ review the two types of plant pollination. Demonstrate the process of plant pollination and show the relation ship between bees and flowers. Compare the effects of various conditions on pollination through a game in which several variables are manipulated. **CALORIE COUNTING** ♦ describe what calories are and how they provide energy. Gather data for 24 hours and make graphs charting caloric intake and energy expenditure. Make comparisons among food labels and draw conclusions about calories used during different activities. **DON'T USE IT ALL UP!** ♦ introduce the effects a growing population has on the environment. Draw conclusions from a study involving natural resources (air, water, plants, animals, and soil). Graph the earth's total water supply and investigate the strains on natural resources. **FROM APPLE CORES TO HEALTHY SOIL** ♦ design a scientific investigation that shows how temperature, air, water, and soil organisms enrich the soil. Investigate the nutrient cycle. **YOUR SCHOOLGROUND! THROUGH NEW EYES** ♦ develop observation skills by examining the schoolground area. Map the school ground area from memory and others from observations or measurement. Design plans to improve and maintain school grounds.

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change	**Conceptual Understanding** **Earth/Space Science** ♦ investigate the structure of the Earth system (e.g., lithosphere, rock cycle, water cycle, weather, climate).	**FROM APPLE CORES TO HEALTHY SOIL** ♦ design a scientific investigation that shows how temperature, air, water, and soil organisms enrich the soil. Investigate the nutrient cycle.
	Life Science ♦ investigate structure (e.g., cells, tissues, organs) and function (e.g., growth, muscular function, digestion) in living systems.	**CALORIE COUNTING** ♦ gather and compare data for 24 hours. Chart and graph caloric intake for different levels of energy for growth and development.
	♦ analyze reproduction (e.g., asexual, sexual) and heredity (e.g., genetic information, inherited traits).	**BANKING ON SEEDS** ♦ analyze the critical role that seeds have played through history by comparing the use of seeds by people in the past, present, and in the future. Create a scientific experiment that involves labeling seed parts, gathering, planting, and storing seeds for a seed bank. **BUZZY BUZZY BEE** ♦ review the two types of plant pollination. Demonstrate the process of plant pollination and show the relationship between bees and flowers. Compare the effects of various conditions on pollination through a game in which several variables are manipulated.
	♦ analyze regulation (changing physiological activities) and behavior (a set of responses).	**BUZZY BUZZY BEE** ♦ review and demonstrate the process of plant pollination and show the relationship between bees and flowers. Compare the effects of various conditions on pollination through a game in which several variables are manipulated. **CALORIE COUNTING** ♦ gather and compare data for 24 hours. Chart and graph caloric intake for different levels of energy for growth and development.
	♦ investigate and analyze populations and ecosystems.	**DON'T USE IT ALL UP!** ♦ Introduce the effects that a growing population has on the environment. Draw conclusions from a study involving natural resources (air, water, plants, animals, and soil.) Graph the earth's total water supply and investigate the strains on natural resources. **LUNCHTIME FAVORITES** ♦ learn the interdependence of plants, animals, and people by tracing the sources of their food. Explore how history, geography, and economic conditions influence food choices in different cultures.

2.2-2.6 Patterns, Systems, Scale, and Models, Constancy, and Change Over Time (Cont'd)	**Life Science (cont'd)**	**YOUR SCHOOLGROUND! THROUGH NEW EYES** ♦ develop observation skills by examining the school-ground area. Map the school ground area from memory and others from observations or measurement. Design plans to improve and maintain school grounds.
	♦ analyze diversity and adaptations (e.g., changes in structure, behaviors, or physiology).	**BANKING ON SEEDS** ♦ analyze the critical role that seeds have played through history by comparing the use of seeds by people in the past, present, and in the future. Create a scientific experiment labeling seed parts, gathering, planting, and storing seeds for a seed bank. **YOUR SCHOOLGROUND! THROUGH NEW EYES** ♦ develop observation skills by examining the school-ground area. Map the school ground area from memory and others from observations or measurement. Design plans to improve and maintain school grounds.
	Applications/Connections ♦ recognize how science is used to understand changes in populations, issues related to resources, and changes in environments.	**BANKING ON SEEDS** ♦ recognize the critical role that seeds have played through history by comparing the use of seeds. Create a scientific experiment that involves labeling seed parts, gathering, planting, and storing seeds for a seed bank. Explore the importance of seed banks and the diversity of seed crops. **BUZZY BUZZY BEE** ♦ review the two types of plant pollination. Demonstrate the process of plant pollination and show the relationship between bees and flowers. Compare the effects of various conditions on pollination through a game in which several variables are manipulated. Investigate the relationship between insect and plant pollination. **DON'T USE IT ALL UP!** ♦ recognize the effects that a growing population has on the environment. Draw conclusions from a study involving natural resources (air, water, plants, animals, and soil). Graph the earth's total water supply, investigate the strains on natural resources (renewable and nonrenewable), and offer suggestions to help conserve these resources. **FROM APPLE CORES TO HEALTHY SOIL** ♦ design a scientific investigation that shows how temperature, air, water, and soil organisms enrich the soil. Investigate the nutrient cycle. Connect knowledge of nutrient cycle and composting to waste management challenges.

2.2-2.6 Patterns, Systems, Scale, and Models, Constancy, and Change Over Time (Cont'd)	**Applications/Connections (cont'd)**	**FROM FIBER TO FASHION** ♦ identify and compare the origins and sources of synthetic and natural fibers. Generalize connections between fabric/clothing choices and renewable and nonrenewable resources. **NAIL BY NAIL, BOARD BY BOARD** ♦ investigate the origin of building materials and categorize them according to the natural resource from which they originate. Predict the materials for which a building might be constructed in the future.
	♦ use science to evaluate the risks and benefits to society for common activities (e.g., riding on airplanes, choice of habitation).	**CALORIE COUNTING** ♦ gather and compare data for 24 hours charting and graphing caloric intake for different levels of energy for growth and development. **GIFTS FROM THE SUN** ♦ investigate the interdependence of plants, food, and people through the study of photosynthesis. **WHAT'S THE SHAPE OF YOUR DIET?** ♦ explore the importance of having a healthy diet. Learn the basics of the Food Guide Pyramid from the USDA. Record food and beverage intake evaluating nutritional value.
	♦ demonstrate the role science plays in everyday life and explore different careers in science.	**BUZZY BUZZY BEE** ♦ review the two types of plant pollination. Demonstrate the process of plant pollination and show the relationship between bees and flowers. Explore the careers involving orchards and apiaries. **CALORIE COUNTING** ♦ gather and compare data for 24 hours charting and graphing caloric intake for different levels of energy for growth and development. Connect various careers to diet and physical fitness. **FROM FIBER TO FASHION** ♦ identify and compare the origins and sources of synthetic and natural fibers. Generalize connections between fabric/clothing choices and renewable and nonrenewable resources. Identify careers associated with the clothing industry. **LUNCHTIME FAVORITES** ♦ learn the interdependence of plants, animals, and people by tracing the sources of their food. Explore how history, geography, and economic conditions influence food choices in different cultures.

2.2-2.6 Patterns, Systems, Scale, and Models, Constancy, and Change Over Time (Cont'd)		**NAIL BY NAIL, BOARD BY BOARD** ♦ find the origin of building materials and categorize them according to the natural resource from which they originate. Identify occupations involved in the building industry. **YOUR SCHOOLGROUND! THROUGH NEW EYES** ♦ develop and sharpen observation skills by examining the school-ground area. Map the school ground area from memory and others from observations or measurement. Design plans to improve schoolyard and explore careers related to observation and cartography.
	Applications/Connections (cont'd) ♦ recognize that science is a process that generates conceptual understandings and solves problems.	**BANKING ON SEEDS** ♦ recognize the critical role that seeds have played through history by comparing the use of seeds. Create a scientific experiment that involves labeling seed parts, gathering, planting, and storing seeds for a seed bank. Explore the importance of seed banks and the diversity of seed crops. **FROM APPLE CORES TO HEALTHY SOIL** ♦ design a scientific investigation that shows how temperature, air, water, and soil organisms enrich the soil. Investigate the nutrient cycle. Connect knowledge of nutrient cycle and composting to waste management challenges.
	♦ explore the importance of scientific discoveries in world history (e.g., new drugs, weapons, transportation).	**TILL WE OR WON'T WE?** ♦ discuss the importance of topsoil and soil resources. Construct and conduct experiments simulating rain on a field. Investigate how soil preparation and soil tillage techniques affect soil erosion, and water runoff.
2.20 Historical Perspective	**SOCIAL STUDIES** ♦ develop a chronological understanding of the early history of the United States (early inhabitants to Reconstruction).	**BANKING ON SEEDS** ♦ explore the critical role that seeds have played through history Compare uses of seeds by people in the past, present, and in the future. **FROM FIBER TO FASHION** ♦ identify and compare origins and sources of fiber. Distinguish the difference between natural and synthetic fibers. Explore the different types of fiber and how they have developed through time. **NAIL BY NAIL, BOARD BY BOARD** ♦ investigate the origin of building materials. Categorize according to the natural resource from which they originate. Explore uses for materials in building and manufacturing in United States history.

2.20 Historical Perspective (cont'd)		**TILL WE OR WON'T WE?** ♦ discuss the importance of topsoil and soil resources. Compare soil tillage techniques throughout history in the United States. **WHAT WILL THE LAND SUPPORT?** ♦ observe the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ recognize cause-and-effect relationships and multiple causes of events in United States history.	**ALMOST SIX BILLION AND STILL GROWING** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine how birth rates affect population growth and doubling time. **BANKING ON SEEDS** ♦ explore the critical role that seeds have played through history and will play in the future. Compare the use of seeds by people in the past, present, and in the future. **BREADS AROUND THE WORLD** ♦ identify types of bread along with the country or region in which they developed. Recognize the cultural and historical significance of grain crops in bread production. **DON'T USE IT ALL UP!** ♦ recognize the strain on natural resources by participating in a sponge demonstration symbolizing human resource consumption. Demonstrate the effects of a growing population on available natural resources through real-life examples. **GERM BUSTERS** ♦ recognize the effect that improper hand washing has on spreading bacteria causing illness and disease. Conduct a controlled experiment demonstrating the spread of germs. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Recognize the effect of differing growth rates on population size. **TILL WE OR WON'T WE?** ♦ recognize the importance of topsoil and soil resources. Investigate how soil preparation and tillage techniques affect soil erosion and water runoff. Compare soil tillage techniques throughout history. **WHAT WILL THE LAND SUPPORT?** ♦ recognize the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.

2.20 Historical Perspective (cont'd)	♦ examine the impact of significant individuals and groups in early United States history.	**BANKING ON SEEDS** ♦ explore the critical role that seeds have played through history. Compare the use of seeds by people in the past, present, and in the future. **BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions of the world that produce grain crops. Examine the role that grain crops have played in United States history. **FROM FIBER TO FASHION** ♦ identify and compare origins and sources of fiber. Distinguish the difference between natural and synthetic fibers. Explore the different types of fiber and how they have developed through time. **GALA FIESTA JAMBOREE** ♦ examine the history and cultural differences in special celebrations. Research harvest festivals and other celebrations, focussing on the purpose, geographic location, and history. **TILL WE OR WON'T WE?** ♦ recognize the importance of topsoil and soil resources. Investigate how soil preparation and tillage techniques affect soil erosion and water runoff. Compare soil tillage techniques throughout history. **WHAT WILL THE LAND SUPPORT?** ♦ examine the impact of the early settlers using natural resources. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.

2.20 Historical Perspective (cont'd)	♦ analyze the social, political, and economic characteristics of eras in American history to Reconstruction (Land and People before Columbus, Age of Exploration, Colonization, War of Independence, Young Republic, Westward Expansion, Industrialism, Civil War).	**BANKING ON SEEDS** ♦ explore the critical role that seeds have played through history. Compare the use of seeds by people in the past, present, and in the future. **BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions of the world that produce grain crops. Examine the role that grain crops have played in United States history. **FROM FIBER TO FASHION** ♦ identify and compare origins and sources of fiber. Distinguish the difference between natural and synthetic fibers. Explore the different types of fiber and how they have developed through time. **TILL WE OR WON'T WE?** ♦ discuss the importance of topsoil and soil resources. Compare soil tillage techniques and the effects of farming and ranching on the land. **WHAT WILL THE LAND SUPPORT?** ♦ examine the impact of the early settlers on natural resources. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ recognize the significance of geographical settings and natural resources on historical perspective and events in early United States history.	**BANKING ON SEEDS** ♦ explore the critical role that seeds have played through history. Compare the use of seeds by people in the past, present, and in the future. **BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions of the world that produce grain crops. Examine the role that grain crops have played in United States history. **FROM FIBER TO FASHION** ♦ identify and compare origins and sources of fibers. Explore the different types of fiber and how they have developed through time. Research the history of the garment industry. **LUNCHTIME FAVORITES** ♦ investigate the interdependence of plants, animals, and people by tracing sources of their food. Explore how history, geography, and resources influence food choices in different cultures. **TILL WE OR WON'T WE?** ♦ recognize the importance of topsoil and soil resources. Conduct experiments simulating rain on a field, investigate how soil preparation and soil tillage techniques affect soil erosion, and water runoff. Compare soil tillage techniques throughout history.

2.20 Historical Perspective (cont'd)	♦ examine the impact of technological advances on early United States history.	**BANKING ON SEEDS** ♦ examine the technological advances that have occurred in seed and plant production throughout time. Compare the uses of seeds by people in the past, present, and in the future. **BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions of the world where grain crops are grown. Examine the role that grain crops have played in United States history. **FROM FIBER TO FASHION** ♦ identify and compare origins and sources of fiber. Distinguish the difference between natural and synthetic fibers. Examine how different types of fiber have developed through time. **GERM BUSTERS** ♦ conduct a controlled experiment demonstrating the spread of germs. Identify forms of germs. Examine the impact that proper food handling has had on health and food safety.
2.19 Geography	♦ examine patterns of human movement settlement, and interaction in early American history and investigate how those patterns influenced culture and society in the United States.	**BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions of the world where grain crops are grown. Examine the role that grain crops have played in United States history. **GALA FIESTA JAMBOREE** ♦ examine the history and cultural differences in special celebrations. Research harvest festivals and other celebrations, focussing on the purpose, geographic location, and history. **LUNCHTIME FAVORITES** ♦ investigate the interdependence of plants, animals, and people by tracing sources of their food. Explore how history, geography, and resources influence food choices in different cultures. **TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Play a vocabulary development game using classification of byproducts and benefits from trees.
	♦ explore reasons behind patterns of human settlement across the United States that resulted in the diverse cultures of the United States.	**BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions of the world where grain crops are grown. Examine the role that grain crops have played in United States history.

2.19 Geography (cont'd)		**GALA FIESTA JAMBOREE** ♦ examine the history and cultural differences in special celebrations. Research harvest festivals and other celebrations, focussing on the purpose, geographic location, and history. **LUNCHTIME FAVORITES** ♦ investigate the interdependence of plants, animals, and people by tracing sources of their food. Explore how history, geography, and resources influence food choices in different cultures.
	♦ examine how early United States history was influenced by the physical environment.	**BANKING ON SEEDS** ♦ examine the technological advances that have occurred in seed and plant production throughout time. Compare the uses of seeds by people in the past, present, and in the future. **BREADS AROUND THE WORLD** ♦ examine the role that grain crops have played in United States history. Identify types of bread along with the cultures in which they developed. Locate the countries or regions of the world where grain crops are grown. **DON'T USE IT ALL UP!** ♦ recognize the strain on natural resources by participating in a sponge demonstration symbolizing human resource consumption. Demonstrate the effects of a growing population on available natural resources through real-life examples. **FROM FIBER TO FASHION** ♦ identify and compare origins and sources of fiber. Distinguish the difference between natural and synthetic fibers and how the environment impacts their products. **LUNCHTIME FAVORITES** ♦ investigate the interdependence of plants, animals, and people by tracing sources of their food. Explore how history, geography, and resources influence food choices in different cultures. **NAIL BY NAIL, BOARD BY BOARD** ♦ investigate the origin of building materials. Categorize according to the natural resource from which they originate. Explore uses for materials in building and manufacturing in United States history. **TILL WE OR WON'T WE?** ♦ discuss the importance of topsoil and soil resources. Conduct experiments simulating rain on a field. Investigate the role of technology in preventing soil erosion and water runoff. Compare the effects of farming and ranching on the land.

2.19 Geography (cont'd)	♦ investigate how Americans used technology, especially in early American history, to modify the environment.	**TILL WE OR WON'T WE?** ♦ discuss the importance of topsoil and soil resources. Conduct experiments simulating rain on a field. Investigate the role of technology in preventing soil erosion and water runoff. Compare the effects of farming and ranching on the land. **FROM FIBER TO FASHION** ♦ identify and compare origins and sources of fiber. Distinguish the difference between natural and synthetic fibers. Explore the different types of fiber and how they have developed through time.
2.18 Economics	♦ relate the concept of scarcity (imbalance between unlimited wants and limited resources) to the development of the United States as it applies to individuals, societies, and governments.	**IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. **NAIL BY NAIL, BOARD BY BOARD** ♦ investigate the origin of building materials. Categorize according to the natural resource from which they originate. Explore uses for materials in building and manufacturing in United States history. **STEP BY STEP** ♦ examine the sequence of production steps involved in transporting food from the field to the consumer (path of production). Identify (path of production). Identify each production step. **TILL WE OR WON'T WE?** ♦ discuss the importance of topsoil and soil resources to satisfy human wants. Compare soil tillage techniques and the effects of farming and ranching on the land. **WHAT WILL THE LAND SUPPORT?** ♦ examine how population growth affects land scarcity. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ analyze economic systems and economic institutions that developed in early United States history.	**FROM FIBER TO FASHION** ♦ identify and compare origins and sources of fiber. Conduct cost benefit analysis between natural and synthetic fibers. **STEP BY STEP** ♦ examine the sequence of production steps involved in transporting food from the field to the consumer (path of production). Identify resources necessary to complete each production step.

2.18 Economics (cont'd)	♦ recognize that government regulation impacts the economy in decisions about productive resources (e.g., natural, human, human-made).	**TRASH BASHING** ♦ identify solid waste while learning importance of reducing, reusing, and recycling. Develop plans to change personal behavior in order to reduce solid waste in landfills. **WHAT WILL THE LAND SUPPORT?** ♦ recognize how population growth affects land scarcity. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ understand how the desire to earn profits influenced the establishment and growth of economic institutions in early United States history.	**IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. **STEP BY STEP** ♦ examine the sequence of production steps involved in transporting food from the field to the consumer (path of production). Discuss the diversity of farming operations. Identify the resources used to complete each production step.
2.14-2.15 Government And Civics	♦ understand how the American political system developed through examining colonial roots of representative democracy, reasons for creating an independent country, and purposes of government.	**COULD IT BE SOMETHING THEY ATE** ♦ conduct an experiment comparing microbial growth that causes food spoilage and contamination on foods. Explore the purpose of the USDA's Food Safety and Inspection Service role in regulating the food industry in promoting food safety.
	♦ examine the rights and responsibilities of individuals in American society by analyzing democratic principles (e.g., liberty, justice, individual human dignity, and the rule of law) as expressed in historical events, historical documents (e.g., the Bill of Rights, Declaration of Independence, U.S. Constitution), and American society.	**IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. Explore the many uses of agriculture on a day to day basis.

2.16-2.17 Culture And Society	♦ examine how culture in the United States has been influenced by language, literature, arts, beliefs, and behavior of people in America's past.	**BANKING ON SEEDS** ♦ analyze the critical role that seeds have played through history. Compare the use of seeds by people in the past, present, and in the future. **BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions where grain crops are grown. Examine the role that grain crops have played in United States history. **EXPRESSION CONNECTION** ♦ explore how farming connects agriculture, environment, diverse cultures and people by playing a vocabulary word game. Develop a poetry project using connections to agriculture, environment, and culture**.** **FROM FIBER TO FASHION** ♦ identify and compare origins and sources of fiber. Distinguish the difference between natural and synthetic fibers. Explore the different types of fiber and how they have developed through time. **GALA FIESTA JAMBOREE** ♦ examine the history and cultural differences in special celebrations. Research harvest festivals and other celebrations, focussing on the purpose, geographic location, and history. **LUNCHTIME FAVORITES** ♦ investigate the interdependence of plants, animals, and people by tracing sources of their food. Explore how history, geography, and resources influence food choices in different cultures. **NAIL BY NAIL, BOARD BY BOARD** ♦ investigate the origin of building materials. Categorize according to the natural resource from which they originate. Explore uses for materials in building and manufacturing in United States history.
	♦ investigate how social institutions addressed human needs in early United States history.	**BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions where grain crops are grown. Examine the role that grain crops have played in United States history. **WHAT WILL THE LAND SUPPORT?** ♦ examine the impact of the early settlers on natural resources. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.

2.16-2.17 Culture and Society (cont'd)	♦ analyze social interactions among diverse groups and individuals in United States history.	**BANKING ON SEEDS** ♦ analyze the critical role that seeds have played through history. Compare the use of seeds by people in the past, present, and in the future. **BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions where grain crops are grown. Examine the role that grain crops have played in United States history. **EXPRESSION CONNECTION** ♦ explore how farming connects agriculture, environment, diverse cultures and people by playing a vocabulary word game. Develop a poetry project using connections to agriculture, environment, and culture**.** **GALA FIESTA JAMBOREE** ♦ examine the history and cultural differences in special celebrations. Research harvest festivals and other celebrations, focussing on the purpose, geographic location, and history. **LUNCHTIME FAVORITES** ♦ investigate the interdependence of plants, animals, and people by tracing sources of their food. Explore how history, geography, and resources influence food choices in different cultures. **WHAT WILL THE LAND SUPPORT?** ♦ consider how population growth affects land scarcity. Model the concept of carrying capacity by playing a board game. Discover the effects of change on the land throughout time.
	♦ analyze social interactions, including conflict and cooperation, among individuals and groups in United States history.	**BANKING ON SEEDS** ♦ explore the critical role that seeds have played through history, by comparing the use of seeds by people in the past, presents, and in the future. Activities include labeling seed parts, gathering, planting, and storing seeds for a seed bank. **BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions of the world where grain crops are grown. Examine the role that grain crops have played in United States history. **GALA FIESTA JAMBOREE** ♦ examine the history and cultural differences in special celebrations. Research harvest festivals and other celebrations, focussing on the purpose, geographic location, and history.

2.16-2.17 Culture and Society (cont'd)		**IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. **LUNCHTIME FAVORITES** ♦ investigate the interdependence of plants, animals, and people by tracing sources of their food. Explore how history, geography, and resources influence food choices in different cultures. **TO WHOM IT MAY CONCERN** ♦ identify and research a controversial issue. Analyze and compile information to form an opinion about the issue. Write a business letter to an individual, group, or organization expressing your concerns. **WHAT WILL THE LAND SUPPORT?** ♦ consider how population growth affects land scarcity. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.

How have changes in agriculture affected the quality of our lives?

How have changes in agriculture affected the quality of our lives?

Academic Expectations	Correlations to the Program of Studies	Sample Activities
	SCIENCE **Students will** **Scientific Inquiry** ♦ identify and refine questions that can be answered through scientific investigations combined with scientific information. ♦ use appropriate equipment (e.g., barometer), tools (e.g., meter sticks) techniques (e.g., computer skills), technology (e.g., computers), and mathematics in scientific investigations. ♦ use evidence (e.g., computer models), logic, and scientific explanations. ♦ design and conduct different kinds of scientific investigations to answer different kinds of questions. ♦ communicate (e.g., write, graph) designs, procedures, and results of scientific investigations. ♦ review and analyze scientific investigations and explanations of other students. **All *Program of Studies* scientific inquiry bullets are included in this guiding question.**	**BANKING ON SEEDS** ♦ explore the critical role that seeds have played through history. Compare the use of seeds by people in the past, present, and in the future. Create a scientific experiment that involves labeling seed parts, gathering, planting, and storing seeds for a seed bank. **CALORIE COUNTING** ♦ describe what calories are and how they provide energy. Gather data for 24 hours and make graphs charting caloric intake and energy expenditure. Make comparisons among food labels and draw conclusions about calories used during different activities. **COULD IT BE SOMETHING THEY ATE?** ♦ conduct experiments comparing microbial (fungal and bacterial) growth that causes food contamination and food spoilage. Analyze behavioral patterns in regard to food handling. **FROM APPLE CORES TO HEALTHY SOIL** ♦ design a scientific investigation that shows how temperature, air, water, and soil organisms enrich the soil. Investigate the nutrient cycle. **GERM BUSTERS** ♦ conduct a controlled experiment demonstrating the spread of germs. Predict, observe, and summarize the experimental results on observation sheets. **INVESTIGATING INSECTS** ♦ identify insects and distinguish between insects and non-insects. Observe and record behaviors of insects. **TILL WE OR WON'T WE** ♦ construct experiments simulating rain on a field. Investigate how soil preparation and soil tillage techniques affect soil erosion and water runoff.

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time	**Earth/Space Science** ♦ investigate the structure of the Earth system (e.g., lithosphere, rock cycle, water cycle, weather, climate).	**FROM APPLE CORES TO HEALTHY SOIL** ♦ design a scientific investigation that shows how temperature, air, water, and soil organisms enrich the soil. Investigate the nutrient cycle. **TILL WE OR WON'T WE** ♦ construct experiments simulating rain on a field. Investigate how soil preparation and soil tillage techniques affect soil erosion and water runoff.
	♦ analyze Earth's history (e.g., Earth processes, catastrophes, evidence for changes).	**FROM APPLE CORES TO HEALTHY SOIL** ♦ design a scientific investigation that shows how temperature, air, water, and soil organisms enrich the soil. Investigate the nutrient cycle. **TILL WE OR WON'T WE** ♦ discuss the importance of topsoil and soil resources. Construct experiments simulating rain on a field. Investigate how soil preparation and soil tillage techniques affect soil erosion and water runoff.
	Life Science ♦ investigate structure (e.g., cells, tissues, organs) and function (e.g., growth, muscular function, digestion) in living systems.	**CALORIE COUNTING** ♦ gather and compare data for 24 hours. Chart and graph caloric intake for different levels of energy for growth and development.
	♦ analyze reproduction (e.g., asexual, sexual) and heredity (e.g., genetic information, inherited traits).	**BANKING ON SEEDS** ♦ analyze the critical role that seeds have played through history by comparing the use of seeds by people in the past, present, and in the future. Create a scientific experiment that involves labeling seed parts, gathering, planting, and storing seeds for a seed bank.

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time (cont'd)	♦ analyze regulation (changing physiological activities) and behavior (a set of responses).	**CALORIE COUNTING** ♦ gather and compare data for 24 hours. Chart and graph caloric intake for different levels of energy for growth and development.
	♦ investigate and analyze populations and ecosystems.	**COULD IT BE SOMETHING THEY ATE??** ♦ conduct experiments comparing microbial (fungal and bacterial) growth that causes food contamination and food spoilage. Analyze behavioral patterns in regard to food handling. **DON'T USE IT ALL UP** ♦ introduce the effects of a growing population has on the environment. Draw conclusions from a study involving natural resources (air, water, plants, animals, and soil.) Graph the earth's total water supply and investigate the strains on natural resources. **LUNCHTIME FAVORITES** ♦ learn the interdependence of plants, animals, and people by tracing the sources of their food. Explore how history, geography, and economic conditions influence food choices in different cultures. **WHAT WILL THE LAND SUPPORT?** ♦ investigate the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game.
	♦ analyze diversity and adaptions (e.g., changes in structure, behaviors, or physiology).	**BANKING ON SEEDS** ♦ analyze the critical role that seeds have played through history by comparing the use of seeds by people in the past, present, and in the future. Create a scientific experiment labeling seed parts, gathering, planting, and storing seeds for a seed bank. **COULD IT BE SOMETHING THEY ATE?** ♦ conduct experiments comparing microbial (fungal and bacterial) growth that causes food contamination and food spoilage. Analyze behavioral patterns in regard to food handling.

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time (cont'd)		**INVESTIGATING INSECTS** ♦ identify insects and distinguish between insects and non-insects. Observe and record behaviors of insects. **TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Classify byproducts and benefits of tress by playing a vocabulary development game.
	Applications/Connections ♦ use scientific inquiry and conceptual understanding to design technological solutions (e.g., zippers, ballpoint pens) to problems	**TILL WE OR WON'T WE** ♦ discuss the importance of topsoil and soil resources. Construct and conduct experiments simulating rain on a field, investigate how soil preparation and soil tillage techniques affect soil erosion, and water runoff.
	♦ examine the interaction between science and technology.	**CLEARED FOR TAKEOFF** ♦ explore the many careers in aviation, while learning the important role that aviation plays in agriculture. Construct a paper airplane and record data in a pilot logbook.
	Applications/Connections ♦ recognize how science is used to understand changes in populations, issues related to resources, and changes in environments.	**BANKING ON SEEDS** ♦ recognize the critical role that seeds have played through history by comparing the use of seeds. Create a scientific experiment that involves labeling seed parts, gathering, planting, and storing seeds for a seed bank. Explore the importance of seed banks and the diversity of seed crops. **COWS OR CONDOS?** ♦ analyze the reasons for agricultural land becoming urban area on the fringes of cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time (cont'd)

DON'T USE IT ALL UP

- recognize the effects that a growing population has on the environment. Draw conclusions from a study involving natural resources (air, water, plants, animals, and soil.) Graph the earth's total water supply and investigate the strains on natural resources (renewable and nonrenewable), and offer suggestions to help conserve these resources.

FROM APPLE CORES TO HEALTHY SOIL

- design a scientific investigation that shows how temperature, air, water, and soil organisms enrich the soil. Investigate the nutrient cycle. Connect knowledge of nutrient cycle and composting to waste management challenges.

NAIL BY NAIL, BOARD BY BOARD

- investigate the origin of building materials and categorize them according to the natural resource from which they originate. Predict the materials for which a building might be constructed in the future.

TILL WE OR WON'T WE

- discuss the importance of topsoil and soil resources. Construct and conduct experiments simulating rain on a field, investigate how soil preparation and soil tillage techniques affect soil erosion, and water runoff.

WHAT WILL THE LAND SUPPORT?

- observe the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game.

♦ use science to evaluate the risks and benefits to society for common activities (e.g., riding on air-planes, choice of habitation).	**CALORIE COUNTING** ♦ gather and compare data for 24 hours charting and graphing caloric intake for different levels of energy for growth and development. **WHAT'S THE SHAPE OF YOUR DIET?** ♦ explore the importance of having a healthy diet. Learn the basics of the Food Guide Pyramid from the USDA. Record food and beverage intake evaluating nutritional value.
Applications/Connections (cont'd) ♦ describe the effects of science and technology (e.g., television, computers) on society	**BY THE WAY** ♦ identify principle products and by-products from cattle Hypothesize relationships among by-products, while conducting a mystery game. **CLEARED FOR TAKEOFF** ♦ explore the many careers in aviation, while learning the important role that aviation plays in agriculture. Construct a paper airplane and record data in a pilot logbook. **TILL WE OR WON'T WE** ♦ discuss the importance of topsoil and soil resources. Construct experiments simulating rain on a field. Investigate how soil preparation and soil tillage techniques affect soil erosion and water runoff.
♦ demonstrate the role science plays in everyday life and explore different careers in science.	**CALORIE COUNTING** ♦ gather and compare data for 24 hours charting and graphing caloric intake for different levels of energy for growth and development. Connect various careers to diet and physical fitness. **CLEARED FOR TAKEOFF** ♦ Explore the many careers in aviation while learning the important role that aviation plays in agriculture. **COULD IT BE SOMETHING THEY ATE?** ♦ associate the basic rules of food safety while analyzing behavior patterns in regard to food handling. Explore the many careers involved in safe food handling.

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time (cont'd)		**FROM FIBER TO FASHION** ♦ identify and compare the origins and sources of synthetic and natural fibers. Generalize connections between fabric/clothing choices and renewable and nonrenewable resources. Identify careers associated with the clothing industry. **LUNCHTIME FAVORITES** ♦ learn the interdependence of plants, animals, and people by tracing the sources of their food. Explore how history, geography, and economic conditions influence food choices in different cultures. **NAIL BY NAIL, BOARD BY BOARD** ♦ find the origin of building materials and categorize them according to the natural resource from which they originate. Identify occupations involved in the building industry. **TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Classify byproducts and benefits of tress by playing a vocabulary development game.
	Applications/Connections (cont'd) ♦ recognize that science is a process that generates conceptual understandings and solves problems.	**BANKING ON SEEDS** ♦ recognize the critical role that seeds have played through history by comparing the use of seeds. Create a scientific experiment that involves labeling seed parts, gathering, planting, and storing seeds for a seed bank. Explore the importance of seed banks and the diversity of seed crops. **COWS OR CONDOS?** ♦ Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model. Identify issues associated with urbanization. **FROM APPLE CORES TO HEALTHY SOIL** ♦ design a scientific investigation that shows how temperature, air, water, and soil organisms enrich the soil. Investigate the nutrient cycle. Connect knowledge of nutrient cycle and composting to waste management challenges.

		TILL WE OR WON'T WE ♦ discuss the importance of topsoil and soil resources. Construct and conduct experiments simulating rain on a field, investigate how soil preparation and soil tillage techniques affect soil erosion, and water runoff.
2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time (cont'd)	♦ explore the importance of scientific discoveries in world history (e.g., new drugs, weapons, transportation).	**LUNCHTIME FAVORITES** ♦ learn the interdependence of plants, animals, and people by tracing the sources of their food. Explore how history, geography, and economic conditions influence food choices in different cultures. **TILL WE OR WON'T WE** ♦ discuss the importance of topsoil, and soil resources. Construct and conduct experiments simulating rain on a field. Investigate how soil preparation and soil tillage techniques affect soil erosion and water runoff.
2.20 Historical Perspective	**SOCIAL STUDIES** ♦ use a variety of tools (e.g., primary and secondary sources, data, artifacts) to explore the interpretive nature (how perceptions of people and passing of time influence accounts of historical events) of United States history.	**ALMOST SIX BILLION AND STILL GROWING** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine how birth rates determine population growth and doubling time. **COWS OR CONDOS?** ♦ Analyze the reasons for agricultural land becoming urban area on the fringes cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model **LESS ELBOW ROOM** ♦ Define the terms "doubling time" and population. Graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates.

2.20 Historical Perspective (cont'd)	♦ develop a chronological understanding of the early history of the United States (early inhabitants to Reconstruction).	**ALMOST SIX BILLION AND STILL GROWING** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine how birth rates determine population growth and doubling time. **FROM FIBER TO FASHION** ♦ identify and compare origins and sources of fiber. Distinguish the difference between natural and synthetic fibers. Explore the different types of fiber and how they have developed through time. **LESS ELBOW ROOM** ♦ define the terms "doubling time" and population. Graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **WHAT WILL THE LAND SUPPORT?** ♦ observe the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ recognize cause-and-effect relationships and multiple causes of events in United States history.	**ALMOST SIX BILLION AND STILL GROWING** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine how birth rates affect population growth and doubling time. **BANKING ON SEEDS** ♦ explore the critical role that seeds have played through history and will play in the future. Compare the use of seeds by people in the past, present, and in the future.

2.20 Historical Perspective (cont'd)

BREADS AROUND THE WORLD

- identify types of bread along with the country or region in which they developed. Recognize the cultural and historical significance of grain crops in bread production.

COWS OR CONDOS?

- recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method.

DON'T USE IT ALL UP

- recognize the strain on natural resources by participating in a sponge demonstration symbolizing human resource consumption. Demonstrate the effects of a growing population on available natural resources through real-life examples.

GERM BUSTERS

- recognize the effect that improper hand washing has on spreading bacteria causing illness and disease. Conduct a controlled experiment demonstrating the spread of germs.

LESS ELBOW ROOM

- graph and compute historical and projected human population growth. Recognize the effect of differing growth rates on population size.

WHAT WILL THE LAND SUPPORT?

- recognize the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.

2.20 Historical Perspective (cont'd)	♦ examine the impact of significant individuals and groups in early United States history.	**BANKING ON SEEDS** ♦ explore the critical role that seeds have played through history. Compare the use of seeds by people in the past, present, and in the future. **BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions of the world where grain crops are grown. Examine the role that grain crops have played in United States history. **COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **FROM FIBER TO FASHION** ♦ identify and compare origins and sources of fiber. Distinguish the difference between natural and synthetic fibers. Explore the different types of fiber and how they have developed through time. **GALA FIESTA JAMBOREE** ♦ examine the history and cultural differences in special celebrations. Research harvest festivals and other celebrations, focussing on the purpose, geographic location, and history. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Recognize the effect of differing growth rates on population size. **TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Play a vocabulary development game using classification of byproducts and benefits from trees. **WHAT WILL THE LAND SUPPORT?** ♦ Examine the impact of the early settlers on natural resources. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.

♦ analyze the social, political, and economic characteristics of eras in American history to Reconstruction (Land and People before Columbus, Age of Exploration, Colonization, War of Independence, Young Republic, Westward Expansion, Industrialism, Civil War).	**BANKING ON SEEDS** ♦ explore the critical role that seeds have played through history. Compare the use of seeds by people in the past, present, and in the future. **BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions of the world that produce grain crops. Examine the role that grain crops have played in United States history. **FROM FIBER TO FASHION** ♦ identify and compare origins and sources of fiber. Distinguish the difference between natural and synthetic fibers. Explore the different types of fiber and how they have developed through time. **WHAT WILL THE LAND SUPPORT?** ♦ Examine the impact of the early settlers using natural resources. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
♦ recognize the significance of geographical settings and natural resources on historical perspective and events in early United States history.	**ALMOST SIX BILLION AND STILL GROWING** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine how birth rates affect population growth and doubling time. **BANKING ON SEEDS** ♦ explore the critical role that seeds have played through history. Compare the use of seeds by people in the past, present, and in the future. **BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions of the world that produce grain crops. Examine the role that grain crops have played in United States history.

2.20 Historical Perspective (cont'd)		**COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **FROM FIBER TO FASHION** ♦ identify and compare origins and sources of fibers. Explore the different types of fiber and how they have developed through time. Research the history of the garment industry. **LUNCHTIME FAVORITES** ♦ investigate the interdependence of plants, animals, and people by tracing sources of their food. Explore how history, geography, and resources influence food choices in different cultures.
	♦ examine the impact of technological advances on early United States history.	**ALMOST SIX BILLION AND STILL GROWING** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine how birth rates affect population growth and doubling time. **BANKING ON SEEDS** ♦ examine the technological advances that have occurred in seed and plant production throughout time. Compare the uses of seeds by people in the past, present, and in the future. **BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions of the world where grain crops are grown. Examine the role that grain crops have played in United States history. **COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method.

2.20 Historical Perspective (cont'd)		**FROM FIBER TO FASHION** ♦ identify and compare origins and sources of fiber. Distinguish the difference between natural and synthetic fibers. Examine how different types of fiber have developed through time. **GERM BUSTERS** ♦ conduct a controlled experiment demonstrating the spread of germs. Identify forms of germs. Examine the impact that proper food handling has had on health and food safety.
	♦ understand the development of democratic thought in early America.	**ALMOST SIX BILLION AND STILL GROWING** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine how birth rates affect population growth and doubling time. **COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method.
2.19 Geography	♦ examine patterns of human movement settlement, and interaction in early American history and investigate how those patterns influenced culture and society in the United States.	**ALMOST SIX BILLION AND STILL GROWING** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine how birth rates affect population growth and doubling time. **BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions of the world where grain crops are grown. Examine the role that grain crops have played in United States history. **COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method.

2.19 Geography		**GALA FIESTA JAMBOREE** ♦ examine the history and cultural differences in special celebrations. Research harvest festivals and other celebrations focussing on the purpose, geographic location, and history. **LUNCHTIME FAVORITES** ♦ investigate the interdependence of plants, animals, and people by tracing sources of their food. Explore how history, geography, and resources influence food choices in different cultures. **TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Play a vocabulary development game using classification of byproducts and benefits from trees. **WHAT WILL THE LAND SUPPORT?** ♦ Explore the patterns of the early settlers. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ explore reasons behind patterns of human settlement across the United States that resulted in the diverse cultures of the United States.	**ALMOST SIX BILLION AND STILL GROWING** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine how birth rates affect population growth and doubling time. **BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions of the world where grain crops are grown. Examine the role that grain crops have played in United States history. **COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method.

2.19 Geogaphy (cont'd)		**GALA FIESTA JAMBOREE** ♦ examine the history and cultural differences in special celebrations. Research harvest festivals and other celebrations, focussing on the purpose, geographic location, and history. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Recognize the effect of differing growth rates on population size. **LUNCHTIME FAVORITES** ♦ investigate the interdependence of plants, animals, and people by tracing sources of their food. Explore how history, geography, and resources influence food choices in different cultures. **WHAT WILL THE LAND SUPPORT?** ♦ explore the patterns of the early settlers. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ examine how early United States history was influenced by the physical environment.	**ALMOST SIX BILLION AND STILL GROWING** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine how birth rates affect population growth and doubling time. **BANKING ON SEEDS** ♦ examine the technological advances that have occurred in seed and plant production throughout time. Compare the uses of seeds by people in the past, present, and in the future. **BREADS AROUND THE WORLD** ♦ examine the role that grain crops have played in United States history. Identify types of bread along with the cultures in which they developed. Locate the countries or regions of the world where grain crops are grown. **COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method.

2.19 Geography (cont'd)		**FROM FIBER TO FASHION** ♦ identify and compare origins and sources of fiber. Distinguish the difference between natural and synthetic fibers. Explore how the environment impacts their products. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Recognize the effect of differing growth rates on population size. **LUNCHTIME FAVORITES** ♦ investigate the interdependence of plants, animals, and people by tracing sources of their food. Explore how history, geography, and resources influence food choices in different cultures. **TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Examine the origin of the wood product and what effect the use of trees has on the environment. **WHAT WILL THE LAND SUPPORT?** ♦ explore the patterns of the early settlers. Model the concept of carrying capacity by playing a board game and examine the limitations of natural resources in selecting homestead sites.
	♦ investigate how Americans used technology, especially in early American history, to modify the environment.	**TRASH BASHING** ♦ identify solid waste while learning importance of reducing, reusing, and recycling. Develop plans to change personal behavior in order to reduce solid waste in landfills.
	♦ relate the concept of scarcity (imbalance between unlimited wants and limited resources) to the development of the United States as it applies to individuals, societies, and governments.	**COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **DON'T USE IT ALL UP** ♦ recognize the strain on natural resources (renewable and nonrenewable) and offers suggestions to help conserve these resources. Introduction to the effect that a growing population has on the environment.

2.18
Economics

FROM FIBER TO FASHION
- identify and compare the origins and sources of synthetic and natural fibers. Generalize connections between fabric/clothing choices and renewable and nonrenewable resources.

IT ALL STARTS WITH A
- describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture.

STEP BY STEP
- examine the sequence of production steps involved in transporting food from the field to the consumer (path of production). Identify resources necessary to complete each production step.

TREE-MENDOUS
- identify and categorize characteristics and uses of trees. Examine the origin of the wood product and what effect the use of trees has on the environment.

WHAT WILL THE LAND SUPPORT?
- examine how population growth affects land scarcity. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.

- analyze economic systems and economic institutions that developed in early United States history.

BANKING ON SEEDS
- analyze the critical role that seeds have played through history. Compare the use of seeds by people in the past, present, and in the future.

STEP BY STEP
- examine the sequence of production steps involved in transporting food from the field to the consumer (path of production). Identify resources necessary to complete each production step.

2.18 Economics (cont'd)	♦ recognize that government regulation impacts the economy in decisions about productive resources (e.g., natural, human, human-made).	**TO WHOM IT MAY CONCERN** ♦ identify and research a controversial issue. Analyze and compile information to form an opinion about the issue. Write a business letter expressing your concerns to a group or organization. **TRASH BASHING** ♦ identify solid waste while learning importance of reducing, reusing, and recycling. Develop plans to change personal behavior in order to reduce solid waste in landfills.
	♦ understand how the desire to earn profits influenced the establishment and growth of economic institutions in early United States history.	**COULD IT BE SOMETHING THEY ATE? ?** ♦ conduct an experiment comparing microbial (fungal and bacterial) growth that causes food contamination and food spoilage. Associate the basic rules of food safety, while analyzing behavior patterns in regard to food handling. **FROM FIBER TO FASHION** ♦ identify and compare the origins and sources of synthetic and natural fibers. Generalize connections between fabric/clothing choices and renewable and nonrenewable resources. Identify careers associated with the clothing industry. **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. **STEP BY STEP** ♦ examine the sequence of production steps involved in transporting food from the field to the consumer (path of production). Discuss the diversity of farming operations. Identify the resources used to complete each production step. **TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Play a vocabulary development game using classification of byproducts and benefits from trees.Rxamine the wood industry and explore the many indistries that rely on wood products.

2.18 Economics (cont'd)	♦ understand how the American political system developed through examining colonial roots of representative democracy, reasons for creating an independent country, and purposes of government	**COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture.
	♦ investigate the political process established by the U.S. constitution, including a system of separation of power with checks and balances and division of power among the states and national government.	**TO WHOM IT MAY CONCERN** ♦ research an issue in history that was decided based on the influence of a vocal, mobilized, and informed citizenry. Compose a letter voicing a concern to an elected official.
2.14-2.15 Government And Civics	♦ examine the rights and responsibilities of individuals in American society by analyzing democratic principles (e.g., liberty, justice, individual human dignity, and the rule of law) as expressed in historical events, historical documents (e.g., the Bill of Rights, Declaration of Independence, U.S. Constitution), and American society.	**COWS OR CONDOS?** ♦ examine the reasons for agricultural land becoming urban area on the fringes of cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model. **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. Explore the many uses of agriculture on a day to day basis. **TO WHOM IT MAY CONCERN** ♦ identify and research a controversial issue. Analyze and compile information to form an opinion about the issue. Write a business letter expressing your concerns to a group or organization.

2.16-2.17 Culture And Society	♦ examine how culture in the United States has been influenced by language, literature, arts, beliefs, and behavior of people in America's past.	**BANKING ON SEEDS** ♦ analyze the critical role that seeds have played through history. Compare the use of seeds by people in the past, present, and in the future. **BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions where grain crops are grown. Examine the role that grain crops have played in United States history. **COWS OR CONDOS?** ♦ explain the reasons for agricultural land becoming urban area on the fringes of cities in the United States. Analyze the cultural beliefs of urban and rural people. **EXPRESSION CONNECTION** ♦ explore how farming connects agriculture, environment, diverse cultures and people by playing a vocabulary word game. Develop a poetry project using connections to agriculture, environment, and culture. **FROM FIBER TO FASHION** ♦ identify and compare origins and sources of fiber. Distinguish the difference between natural and ssynthetic fibers. Explore the different types of fiber and how they have developed through time. **GALA FIESTA JAMBOREE** ♦ examine the history and cultural differences in special celebrations. Research harvest festivals and other celebrations, focussing on the purpose, geographic location, and history. **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. Explore the many uses of agriculture on a day to day basis. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates.

2.16-2.17 Culture And Society		**LUNCHTIME FAVORITES** ♦ investigate the interdependence of plants, animals, and people by tracing sources of their food. Explore how history, geography, and resources influence food choices in different cultures. **WHAT WILL THE LAND SUPPORT?** ♦ explore the patterns of the early settlers. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ investigate how social institutions addressed human needs in early United States history.	**BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions where grain crops are grown. Examine the role that grain crops have played in United States history. **FROM FIBER TO FASHION** ♦ identify and compare origins and sources of fiber. Distinguish the difference between natural and synthetic fibers. Explore the different types of fiber and how they have developed through time **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. Explore the many uses of agriculture on a day to day basis. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **LUNCHTIME FAVORITES** ♦ investigate the interdependence of plants, animals, and people by tracing sources of their food. Explore how history, geography, and resources influence food choices in different cultures.

2.16-2.17 Culture And Society (cont'd)	♦ analyze social interactions among diverse groups and individuals in United States history.	**BANKING ON SEEDS** ♦ analyze the critical role that seeds have played through history. Compare the use of seeds by people in the past, present, and in the future. **BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions of the world where grain crops are grown. Examine the role that grain crops have played in United States history. **EXPRESSION CONNECTION** ♦ explore how farming connects agriculture, environment, diverse cultures and people, by playing a vocabulary word game. Develop a poetry project using connections to agriculture, environment, and culture. **GALA FIESTA JAMBOREE** ♦ examine the history and cultural differences in special celebrations. Research harvest festivals and other celebrations, focussing on the purpose, geographic location, and history. **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. Explore the many uses of agriculture on a day to day basis. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **LUNCHTIME FAVORITES** ♦ investigate the interdependence of plants, animals, and people by tracing sources of their food. Explore how history, geography, and resources influence food choices in different cultures. **TO WHOM IT MAY CONCERN** ♦ identify and research a controversial issue. Analyze and compile information to form an opinion about the issue. Write a business letter to an individual, group, or organization expressing your concerns.

2.16-2.17 Culture And Society (cont'd)

TO WHOM IT MAY CONCERN

- identify and research a controversial issue. Analyze and compile information to form an opinion about the issue. Write a business letter to an individual, group, or organization expressing your concerns.

WHAT WILL THE LAND SUPPORT?

- consider how population growth affects land scarcity. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.

How does the relationship between agricultural productivity and environmental responsibility impact us?

How does the relationship between agricultural productivity and environmental responsibility impact us?

8th Grade Science/Social Studies

Academic Expectations	Correlations to the Program of Studies	Sample Activities
2.1 Scientific Ways of Thinking and Working	**SCIENCE** **Students will** **Scientific Inquiry** ♦ identify and refine questions that can be answered through scientific investigations combined with scientific information. ♦ use appropriate equipment (e.g., barometer), tools (e.g., meter sticks) techniques (e.g., computer skills), technology (e.g., computers), and mathematics in scientific investigations. ♦ use evidence (e.g., computer models), logic, and scientific explanations. ♦ design and conduct different kinds of scientific investigations to answer different kinds of questions. ♦ communicate (e.g., write, graph) designs, procedures, and results of scientific investigations. ♦ review and analyze scientific investigations and explanations of other students. **All *Program of Studies* scientific inquiry bullets are included in this guiding question.**	**BUZZY BUZZY BEE** ♦ review the two types of plant pollination. Demonstrate the process of plant pollination and show the relationship between bees and flowers. **TILL WE OR WON'T WE** ♦ construct experiments simulating rain on a field. Investigate how soil preparation and soil tillage techniques affect soil erosion and water runoff.

2.1 Scientific Ways of Thinking and Working (cont'd)	**Earth/Space Science** ♦ investigate the structure of the Earth system (e.g., lithosphere, rock cycle, water cycle, weather, climate).	**FROM APPLE CORES TO HEALTHY SOIL** ♦ design a scientific investigation that shows how temperature, air, water, and soil organisms enrich the soil. Investigate the nutrie **TILL WE OR WON'T WE** ♦ construct experiments simulating rain on a field. Investigate how soil preparation and soil tillage techniques affect soil erosion and water runoff.
	Earth/Space Science ♦ analyze Earth's history (e.g., Earth processes, catastrophes, evidence for changes).	**ALMOST SIX BILLION AND STILL GROWING** ♦ graph historical and projected world populations. Analyze how natural disasters, disease, and war affect death and birth rates which determine population growth and doubling time. **TILL WE OR WON'T WE** ♦ discuss the importance of topsoil and soil resources. Construct experiments simulating rain on a field. Investigate how soil preparation and soil tillage techniques affect soil erosion and water runoff.
2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time	**Life Science** ♦ analyze reproduction (e.g., asexual, sexual) and heredity (e.g., genetic information, inherited traits).	**BUZZY BUZZY BEE** ♦ review the two types of plant pollination. Demonstrate the process of plant pollination and show the relationship between bees and flowers. Compare the effects of various conditions on pollination through a game in which several variables are manipulated.
	♦ analyze regulation (changing physiological activities) and behavior (a set of responses).	**BUZZY BUZZY BEE** ♦ review and demonstrate the process of plant pollination and show the relationship between bees and flowers. Compare the effects of various conditions on pollination through a game in which several variables are manipulated. **WHAT WILL THE LAND SUPPORT?** ♦ observe the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time (cont'd)	**Life Science (cont'd)** ♦ investigate and analyze populations and ecosystems.	**ALMOST SIX BILLION AND STILL GROWING** ♦ graph historical and projected world populations. Analyze how natural disasters, disease, and war affect death and birth rates which determine population growth and doubling time. **COWS OR CONDOS?** ♦ analyze the reasons for agricultural land becoming urban area on the fringes of cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model **LESS ELBOW ROOM** ♦ define the terms "doubling time" and population. Graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **PIECING TOGETHER POPULATION PATTERNS** ♦ analyze population patterns and other vital statistics for countries around the world. Develop a presentation about a country's population statistics and the effects of population growth on food, economics, and natural resources. **WHAT WILL THE LAND SUPPORT?** ♦ investigate the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game.
	♦ analyze diversity and adaptions (e.g., changes in structure, behaviors, or physiology).	**LESS ELBOW ROOM** ♦ define the terms "doubling time" and population. Graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **TRASH BASHING** ♦ identify solid waste while learning importance of reducing, reusing, and recycling. Develop plans to change personal behavior in order to reduce solid waste in landfills.

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time (cont'd)		**TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Classify byproducts and benefits of tress by playing a vocabulary development game.
	Applications/Connections ♦ use scientific inquiry and conceptual understanding to design technological solutions (e.g., zippers, ballpoint pens) to problems.	**TILL WE OR WON'T WE** ♦ discuss the importance of topsoil and soil resources. Construct and conduct experiments simulating rain on a field, investigate how soil preparation and soil tillage techniques affect soil erosion, and water runoff.
	♦ recognize how science is used to understand changes in populations, issues related to resources, and changes in environments.	**ALMOST SIX BILLION AND STILL GROWING** ♦ graph historical and projected world populations. Analyze how natural disasters, disease, and war affect death and birth rates which determine population growth and doubling time. **BUZZY BUZZY BEE** ♦ review the two types of plant pollination. Demonstrate the process of plant pollination and show the relationship between bees and flowers. Compare the effects of various conditions on pollination through a game in which several variables are manipulated. Investigate the relationship between insect and plant pollination. **COWS OR CONDOS?** ♦ analyze the reasons for agricultural land becoming urban area on the fringes of cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model **FROM FIBER TO FASHION** ♦ identify and compare the origins and sources of synthetic and natural fibers. Generalize connections between fabric/clothing choices and renewable and nonrenewable resources.

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time (cont'd)		**LESS ELBOW ROOM** ♦ define the terms "doubling time" and population. Graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **PIECING TOGETHER POPULATION PATTERNS** ♦ analyze population patterns and other vital statistics for countries around the world. Develop a presentation about a country's population statistics and the effects of population growth on food, economics, and natural resources. **TRASH BASHING** ♦ identify solid waste while learning importance of reducing, reusing, and recycling. Develop plans to change personal behavior in order to reduce solid waste in landfills. **WHAT WILL THE LAND SUPPORT?** ♦ observe the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game.
	Applications/Connections (cont'd) ♦ examine the role of science in explaining and predicting natural events (e.g., floods, earthquakes, volcanoes).	**ALMOST SIX BILLION AND STILL GROWING** ♦ graph historical and projected world populations. Analyze how natural disasters, disease, and war affect death and birth rates which determine population growth and doubling time.
	♦ use science to evaluate the risks and benefits to society for common activities (e.g., riding on airplanes, choice of habitation).	**ALMOST SIX BILLION AND STILL GROWING** ♦ graph historical and projected world populations. Analyze how natural disasters, disease, and war affect death and birth rates which determine population growth and doubling time. **CLEARED FOR TAKEOFF** ♦ explore the many careers in aviation while learning the important role that aviation plays in agriculture. Construct a paper airplane, and record data in a pilot log book.

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time (cont'd)	♦ describe the effects of science and technology (e.g., television, computers) on society.	**CLEARED FOR TAKEOFF** ♦ explore the many careers in aviation while learning the important role that aviation plays in agriculture. Construct a paper airplane, and record data in a pilot log book. **TILL WE OR WON'T WE** ♦ discuss the importance of topsoil and soil resources. Construct experiments simulating rain on a field. Investigate how soil preparation and soil tillage techniques affect soil erosion and water runoff.
	♦ demonstrate the role science plays in everyday life and explore different careers in science.	**BUZZY BUZZY BEE** ♦ review the two types of plant pollination. Demonstrate the process of plant pollination and show the relationship between bees and flowers. Explore the careers involving orchards and apiaries. **FROM FIBER TO FASHION** ♦ identify and compare the origins and sources of synthetic and natural fibers. Generalize connections between fabric/clothing choices and renewable and nonrenewable resources. Identify careers associated with the clothing industry. **NAIL BY NAIL, BOARD BY BOARD** ♦ find the origin of building materials and categorize them according to the natural resource from which they originate. Identify occupations involved in the building industry. **TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Classify byproducts and benefits of tress by playing a vocabulary development game.
	♦ recognize that science is a process that generates conceptual understandings and solves problems.	**CLEARED FOR TAKEOFF** ♦ explore the many careers in aviation while learning the important role that aviation plays in agriculture. Construct a paper airplane and record data in a pilot log book. **COWS OR CONDOS?** ♦ Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model. Identify issues associated with urbanization.

2.20 Historical Perspective	**SOCIAL STUDIES** ♦ use a variety of tools (e.g., primary and secondary sources, data, artifacts) to explore the interpretive nature (how perceptions of people and passing of time influence accounts of historical events) of United States history.	**COWS OR CONDOS?** ♦ analyze the reasons for agricultural land becoming urban area on the fringes cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model **LESS ELBOW ROOM** ♦ define the terms "doubling time" and population. Graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates.
	♦ develop a chronological understanding of the early history of the United States (early inhabitants to Reconstruction).	**COWS OR CONDOS?** ♦ analyze the reasons for agricultural land becoming urban area on the fringes cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model **LESS ELBOW ROOM** ♦ define the terms "doubling time" and population. Graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **WHAT WILL THE LAND SUPPORT?** ♦ observe the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ recognize cause-and-effect relationships and multiple causes of events in United States history.	**COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **DON'T USE IT ALL UP** ♦ recognize the strain on natural resources by participating in a sponge demonstration symbolizing human resource consumption. Demonstrate the effects of a growing population on available natural resources through real-life examples.

2.20 Historical Perspective		**LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Recognize the effect of differing growth rates on population size. **TILL WE OR WON'T WE** ♦ recognize the importance of topsoil and soil resources. Investigate how soil preparation and tillage techniques affect soil erosion and water runoff. Compare soil tillage techniques throughout history. **WHAT WILL THE LAND SUPPORT?** ♦ recognize the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ examine the impact of significant individuals and groups in early United States history.	**COWS OR CONDOS?** ♦ Explain and analyze the reasons for agricultural land becoming urban area on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model. Identify and debate issues associated with urbanization. **WHAT WILL THE LAND SUPPORT?** ♦ examine the impact of the early settlers using natural resources. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout
	♦ analyze the social, political, and economic characteristics of eras in American history to Reconstruction (Land and People before Columbus, Age of Exploration, Colonization, War of Independence, Young Republic, Westward Expansion, Industrialism, Civil War).	**COWS OR CONDOS?** ♦ explain and analyze the reasons for agricultural land becoming urban area on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model. Identify and debate issues associated with urbanization. **TILL WE OR WON'T WE** ♦ discuss the importance of topsoil, and soil resources. Compare soil tillage techniques and the effects of farming and ranching on the land.

2.20 Historical Perspective (cont'd)

	WHAT WILL THE LAND SUPPORT? ♦ examine the impact of the early settlers on natural resources. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
♦ recognize the significance of geographical settings and natural resources on historical perspective and events in early United States history.	**COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method.
♦ examine the impact of technological advances on early United States history.	**COWS OR CONDOS?** ♦ recognize the effects of agriculture land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **TILL WE OR WON'T WE** ♦ discuss the importance of topsoil and soil resources. Compare soil tillage techniques and the effects of farming and ranching on the land.
♦ understand the development of democratic thought in early America.	**COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method.
♦ examine patterns of human movement settlement, and interaction in early American history and investigate how those patterns influenced culture and society in the United States.	**COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method.

2.19 Geography		**WHAT WILL THE LAND SUPPORT?** ♦ explore the patterns of the early settlers. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ explore reasons behind patterns of human settlement across the United States that resulted in the diverse cultures of the United States.	**COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Recognize the effect of differing growth rates on population size. **WHAT WILL THE LAND SUPPORT?** ♦ explore the patterns of the early settlers. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ examine how early United States history was influenced by the physical environment.	**COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **DON'T USE IT ALL UP** ♦ recognize the strain on natural resources by participating in a sponge demonstration symbolizing human resource consumption. Demonstrate the effects of a growing population on available natural resources through real-life examples. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Recognize the effect of differing growth rates on population size.

2.19 Geography (cont'd)		**TILL WE OR WON'T WE** ♦ discuss the importance of topsoil and soil resources. Conduct experiments simulating rain on a field, investigate the role of technology in preventing soil erosion, and water runoff. Compare the effects of farming and ranching on the land. **WHAT WILL THE LAND SUPPORT?** ♦ explore the patterns of the early settlers. Model the concept of carrying capacity by playing a board game and examine the limitations of natural resources in selecting homestead sites.
	♦ investigate how Americans used technology, espe cially in early American history, to modify the environment.	**TILL WE OR WON'T WE** ♦ discuss the importance of topsoil and soil resources. Conduct experiments simulating rain on a field, investigate the role of technology in preventing soil erosion, and water runoff. Compare the effects of farming and ranching on the land.
	♦ relate the concept of scarcity (imbalance between unlimited wants and limited resources) to the devel- opment of the United States as it applies to indi- viduals, societies, and governments.	**COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of Ameri- can cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **DON'T USE IT ALL UP** ♦ recognize the strain on natural resources (renewable and nonrenewable) and offers suggestions to help conserve these resources. Introduction to the effect that a growing population has on the environment. **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Recognize the effect of differing growth rates on population size.

2.18 Economics		**STEP BY STEP** ♦ examine the sequence of production steps involved in transporting food from the field to the consumer (path of production). Identify resources necessary to complete each production step. **TILL WE OR WON'T WE** ♦ discuss the importance of topsoil and soil resources to satisfy human wants. Compare soil tillage techniques and the effects of farming and ranching on the land.
	♦ analyze economic systems and economic institutions that developed in early United States history.	**STEP BY STEP** ♦ examine the sequence of production steps involved in transporting food from the field to the consumer (path of production). Identify resources necessary to complete each production step.
	♦ recognize that government regulation impacts the economy in decisions about productive resources (e.g., natural, human, human-made).	**TO WHOM IT MAY CONCERN** ♦ identify and research a controversial issue. Analyze and compile information to form an opinion about the issue. Write a business letter expressing your concerns to a group, or organization. **TRASH BASHING** ♦ identify solid waste while learning importance of reducing, reusing, and recycling. Develop plans to change personal behavior in order to reduce solid waste in landfills.
	♦ understand how the desire to earn profits influenced the establishment and growth of economic institutions in early United States history.	**COULD IT BE SOMETHING THEY ATE? ?** ♦ conduct an experiment comparing microbial (fungal and bacterial) growth that causes food contamination and food spoilage. Associate the basic rules of food safety while analyzing behavior patterns in regard to food handling. **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture.

		STEP BY STEP ♦ examine the sequence of production steps involved in transporting food from the field to the consumer (path of production). Discuss the diversity of farming operations. Identify the resources used to complete each production step.
2.14-2.15 Government and Civics	♦ understand how the American political system developed through examining colonial roots of representative democracy, reasons for creating an independent country, and purposes of government.	**IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates.
	♦ investigate the political process established by the U.S. constitution, including a system of separation of power with checks and balances and division of power among the states and national government.	**TO WHOM IT MAY CONCERN** ♦ research an issue in history that was decided based on the influence of a vocal, mobilized, and informed citizenry. Compose a letter voicing a concern to an elected official. **WHAT WILL THE LAND SUPPORT?** ♦ observe the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game.
	♦ examine the rights and responsibilities of individuals in American society by analyzing democratic principles (e.g., liberty, justice, individual human dignity, and the rule of law) as expressed in historical events, historical documents (e.g., the Bill of Rights, Declaration of Independence, U.S. Constitution), and American society.	**COWS OR CONDOS?** ♦ explain the reasons for agricultural land becoming urban area on the fringes of cities in the United States. Analyze the cultural beliefs of urban and rural people. **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. Explore the many uses agriculture on a day to day basis.

		TO WHOM IT MAY CONCERN ♦ identify and research a controversial issue. Analyze and compile information to form an opinion about the issue. Write a business letter expressing your concerns to a group or organization. **WHAT WILL THE LAND SUPPORT?** ♦ observe the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game.
2.16-2.17 Culture and Society	♦ examine how culture in the United States has been influenced by language, literature, arts, beliefs, and behavior of people in America's past.	**COWS OR CONDOS?** ♦ explain and analyze the reasons for agricultural land becoming urban area on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model. Identify and debate issues associated with urbanization. **EXPRESSION CONNECTION** ♦ explore how farming connects agriculture, environment, diverse cultures and people by playing a vocabulary word game. Develop a poetry project using connections to agriculture, environment, and culture. **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. Explore the many uses of agriculture on a day to day basis.
	♦ investigate how social institutions addressed human needs in early United States history.	**BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions where grain crops are grown. Examine the role that grain crops have played in United States history. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates.

2.16-2.17 Culture and Society (cont'd)		**STEP BY STEP** ♦ view the sequence of production steps involved in transporting food from the field to the consumer (path of production). Discuss the diversity of farming operations and discuss the resources used to supply the final product. **WHAT WILL THE LAND SUPPORT?** ♦ examine the impact of the early settlers on natural resources. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ analyze social interactions among diverse groups and individuals in United States history.	**EXPRESSION CONNECTION** ♦ explore how farming connects agriculture, environment, diverse cultures and people by playing a vocabulary word game. Develop a poetry project using connections to agriculture, environment, and culture**.** **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. Explore the many uses of agriculture on a day to day basis. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **WHAT WILL THE LAND SUPPORT?** ♦ examine the impact of the early settlers on natural resources. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.

2.16-2.17 Culture and Society (cont'd)	♦ analyze social interactions, including conflict and cooperation, among individuals and groups in United States history.	**COWS OR CONDOS?** ♦ explain the reasons for agricultural land becoming urban area on the fringes of cities in the United States. Analyze the cultural beliefs of urban and rural people. **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **TO WHOM IT MAY CONCERN** ♦ identify and research a controversial issue. Analyze and compile information to form an opinion about the issue. Write a business letter to an individual, group, or organization expressing your concerns. **WHAT WILL THE LAND SUPPORT?** ♦ consider how population growth affects land scarcity. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.

How do our values and beliefs about agriculture affect our actions?

How do our values and beliefs about agriculture affect our actions?

Academic Expectations	Correlations to the Program of Studies	Sample Activities
2.1 Scientific Ways of Thinking and Working	**SCIENCE** **Students will** **Scientific Inquiry** ♦ identify and refine questions that can be answered through scientific investigations com ♦ use appropriate equipment (e.g., barometer), tools (e.g., meter sticks) techniques (e.g., computer skills), technology (e.g., computers), and mathematics in scientific investigations. ♦ use evidence (e.g., computer models), logic, and scientific explanations. ♦ design and conduct different kinds of scientific investigations to answer different kinds of questions. ♦ communicate (e.g., write, graph) designs, procedures, and results of scientific investigations. ♦ review and analyze scientific investigations and explanations of other students. **All *Program of Studies* scientific inquiry bullets are included in this guiding question.**	**BANKING ON SEEDS** ♦ explore the critical role that seeds have played through history. Compare the use of seeds by people in the past, present, and in the future. Create a scientific experiment that involves labeling seed parts, gathering, planting, and storing seeds for a seed bank. **BUZZY BUZZY BEE** ♦ review the two types of plant pollination. Demonstrate the process of plant pollination and show the relationship between bees and flowers. Compare the effects of various conditions on pollination through a game in which several variables are manipulated. **COULD IT BE SOMETHING THEY ATE??** ♦ conduct experiments comparing microbial (fungal and bacterial) growth that causes food contamination and food spoilage. Analyze behavioral patterns in regard to food handling. **FROM APPLE CORES TO HEALTHY SOIL** ♦ design a scientific investigation that shows how temperature, air, water, and soil organisms enrich the soil. Investigate the nutrient cycle. **TILL WE OR WON'T WE** ♦ construct experiments simulating rain on a field. Investigate how soil preparation and soil tillage techniques affect soil erosion and water runoff.

2.1 Scientific Ways of Thinking and Working (cont'd)	**Earth/Space Science** ♦ investigate the structure of the Earth system (e.g., lithosphere, rock cycle, water cycle, weather, cli mate).	**FROM APPLE CORES TO HEALTHY SOIL** ♦ design a scientific investigation that shows how temperature, air, water, and soil organisms enrich the soil. Investigate the nutrient cycle. **TILL WE OR WON'T WE** ♦ construct experiments simulating rain on a field. Investigate how soil preparation and soil tillage techniques affect soil erosion and water runoff.
	♦ analyze Earth's history (e.g., Earth processes, catas-trophes, evidence for changes).	**FROM APPLE CORES TO HEALTHY SOIL** ♦ design a scientific investigation that shows how temperature, air, water, and soil organisms enrich the soil. Investigate the nutrient cycle. **TILL WE OR WON'T WE** ♦ discuss the importance of topsoil and soil resources. Construct experiments simulating rain on a field. Investigate how soil preparation and soil tillage techniques affect soil erosion and water runoff.
2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time	**Life Science** ♦ investigate structure (e.g., cells, tissues, organs) and function (e.g., growth, muscular function, digestion) in living systems.	**FROM APPLE CORES TO HEALTHY SOIL** ♦ design a scientific investigation that shows how temperature, air, water, and soil organisms enrich the soil. Investigate the nutrient cycle.
	♦ analyze reproduction (e.g., asexual, sexual) and heredity (e.g., genetic information, inherited traits).	**BANKING ON SEEDS** ♦ analyze the critical role that seeds have played through history by comparing the use of seeds by people in the past, present, and in the future. Create a scientific experiment that involves labeling seed parts, gathering, planting, and storing seeds for a seed bank. **BUZZY BUZZY BEE** ♦ review the two types of plant pollination. Demonstrate the process of plant pollination and show the relationship between bees and flowers. Compare the effects of various conditions on pollination through a game in which several variables are manipulated

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time (cont'd)	**Life Science (cont'd)** ♦ analyze regulation (changing physiological activities) and behavior (a set of responses).	**BUZZY BUZZY BEE** ♦ review and demonstrate the process of plant pollination and show the relationship between bees and flowers. Compare the effects of various conditions on pollination through a game in which several variables are manipulated.
	♦ investigate and analyze populations and ecosystems.	**ALMOST SIX BILLION AND STILL GROWING** ♦ graph historical and projected world populations. Analyze how natural disasters, disease, and war affect death and birth rates which affect population growth and doubling time. **COULD IT BE SOMETHING THEY ATE??** ♦ Conduct experiments comparing microbial (fungal and bacterial) growth that causes food contamination and food spoilage. Analyze behavioral patterns in regard to food handling. **COWS OR CONDOS?** ♦ Analyze the reasons for agricultural land becoming urban area on the fringes of cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model **DON'T USE IT ALL UP** ♦ Introduce the effects that a growing population has on the environment. Draw conclusions from a study involving natural resources (air, water, plants, animals, and soil.) Graph the earth's total water supply and investigate the strains on natural resources. **PIECING TOGETHER POPULATION PATTERNS** ♦ analyze population patterns and other vital statistics for countries around the world. Develop a presentation about a country's population statistics and the effects of population growth on food, economics, and natural resources. **WHAT WILL THE LAND SUPPORT?** ♦ investigate the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game.

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time (cont'd)	**Life Science (cont'd)** ♦ analyze diversity and adaptions (e.g., changes in structure, behaviors, or physiology).	**BANKING ON SEEDS** ♦ analyze the critical role that seeds have played through history, by comparing the use of seeds by people in the past, present, and in the future. Create a scientific experiment labeling seed parts, gathering, planting, and storing seeds for a seed bank. **COULD IT BE SOMETHING THEY ATE??** ♦ conduct experiments comparing microbial (fungal and bacterial) growth that causes food contamination and food spoilage. Analyze behavioral patterns in regard to food handling. **TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Classify byproducts and benefits of tress by playing a vocabulary development game.
	Applications/Connections ♦ use scientific inquiry and conceptual understanding to design technological solutions (e.g., zippers, ballpoint pens) to problems.	**TILL WE OR WON'T WE** ♦ discuss the importance of topsoil and soil resources. Construct and conduct experiments simulating rain on a field, investigate how soil preparation and soil tillage techniques affect soil erosion, and water runoff.
	♦ recognize how science is used to understand changes in populations, issues related to resources, and changes in environments.	**ALMOST SIX BILLION AND STILL GROWING** ♦ graph historical and projected world populations. Analyze how natural disasters, disease, and war affect death and birth rates which determine population growth and doubling time. **BANKING ON SEEDS** ♦ recognize the critical role that seeds have played through history by comparing the use of seeds. Create a scientific experiment that involves labeling seed parts, gathering, planting, and storing seeds for a seed bank. Explore the importance of seed banks and the diversity of seed crops.

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time (cont'd)	Applications/Connections (cont'd)	

BUZZY BUZZY BEE

- review the two types of plant pollination. Demon strate the process of plant pollination and show the relationship between bees and flowers. Compare the effects of various conditions on pollination through a game in which several variables are manipulated. Investigate the relationship between insect and plant pollination.

COWS OR CONDOS?

- analyze the reasons for agricultural land becoming urban area on the fringes of cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model

DON'T USE IT ALL UP

- recognize the effects that a growing population has on the environment. Draw conclusions from a study involving natural resources (air, water, plants, animals, and soil.) Graph the earth's total water supply, and investigate the strains on natural resources (renewable and nonrenew-able), and offer suggestions to help conserve these resources.

FROM APPLE CORES TO HEALTHY SOIL

- design a scientific investigation that shows how temperature, air, water, and soil organisms enrich the soil. Investigate the nutrient cycle. Connect knowledge of nutrient cycle and composting to waste management challenges.

FROM FIBER TO FASHION

- identify and compare the origins and sources of synthetic and natural fibers. Generalize connec-tions between fabric/clothing choices and renewable and nonrenewable resources.

NAIL BY NAIL, BOARD BY BOARD

- investigate the origin of building materials and categorize them according to the natural resource from which they originate. Predict the materials for which a building might be con-structed in the future.

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time (cont'd)		**PIECING TOGETHER POPULATION PATTERNS** ♦ analyze population patterns and other vital statistics for countries around the world. Develop a presentation about a country's population statistics and the effects of population growth on food, economics, and natural resources. **TRASH BASHING** ♦ identify solid waste while learning importance of reducing, reusing, and recycling. Develop plans to change personal behavior in order to reduce solid waste in landfills. **WHAT WILL THE LAND SUPPORT?** ♦ observe the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game.
	♦ examine the role of science in explaining and predicting natural events (e.g., floods, earthquakes, volcanoes).	**ALMOST SIX BILLION AND STILL GROWING** ♦ graph historical and projected world populations. Analyze how natural disasters, disease, and war affect death and birth rates which determine population growth and doubling time.
	♦ use science to evaluate the risks and benefits to society for common activities (e.g.,riding on airplanes, choice of habitation).	**ALMOST SIX BILLION AND STILL GROWING** ♦ graph historical and projected world populations. Analyze how natural disasters, disease, and war affect death and birth rates which determine population growth and doubling time. **COULD IT BE SOMETHING THEY ATE?** ♦ associate the basic rules of food safety, while analyzing behavior patterns in regard to food handling. Explore the many careers involved in safe food handling. **WHAT WILL THE LAND SUPPORT?** ♦ investigate the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game.

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time (cont'd)	♦ describe the effects of science and technology (e.g., television, computers) on society.	**TILL WE OR WON'T WE** ♦ discuss the importance of topsoil and soil resources. Construct experiments simulating rain on a field. Investigate how soil preparation and soil tillage techniques affect soil erosion, and water runoff.
	♦ demonstrate the role science plays in everyday life and explore different careers in science.	**BUZZY BUZZY BEE** ♦ review the two types of plant pollination. Demonstrate the process of plant pollination and show the relationship between bees and flowers. Explore the careers involving orchards and apiaries. **COULD IT BE SOMETHING THEY ATE?** ♦ associate the basic rules of food safety, while analyzing behavior patterns in regard to food handling. Explore the many careers involved in safe food handling. **FROM FIBER TO FASHION** ♦ identify and compare the origins and sources of synthetic and natural fibers. Generalize connections between fabric/clothing choices and renewable and nonrenewable resources. Identify careers associated with the clothing industry. **NAIL BY NAIL, BOARD BY BOARD** ♦ find the origin of building materials and categorize them according to the natural resource from which they originate. Identify occupations involved in the building industry. **TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Classify byproducts and benefits of tress by playing a vocabulary development game.
	Applications/Connections (cont'd) ♦ recognize that science is a process that generates conceptual understandings and solves problems.	**BANKING ON SEEDS** ♦ recognize the critical role that seeds have played through history by comparing the use of seeds. Create a scientific experiment that involves labeling seed parts, gathering, planting, and storing seeds for a seed bank. Explore the importance of seed banks and the diversity of seed crops.

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time (cont'd

COWS OR CONDOS?

- Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model. Identify issues associated with urbanization.

FROM APPLE CORES TO HEALTHY SOIL

- design a scientific investigation that shows how temperature, air, water, and soil organisms enrich the soil. Investigate the nutrient cycle. Connect knowledge of nutrient cycle and composting to waste management challenges.

TILL WE OR WON'T WE

- discuss the importance of topsoil and soil resources. Construct and conduct experiments simulating rain on a field, investigate how soil preparation and soil tillage techniques affect soil erosion, and water runoff.

TRASH BASHING

- identify solid waste while learning importance of reducing, reusing, and recycling. Develop plans to change personal behavior in order to reduce solid waste in landfills.

2.20 Historical Perspective	**Social Studies** ♦ use a variety of tools (e.g., primary and secondary sources, data, artifacts) to explore the interpretive nature (how perceptions of people and passing of time influence accounts of historical events) of United States history.	**COWS OR CONDOS?** ♦ analyze the reasons for agricultural land becoming urban area on the fringes cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model **LESS ELBOW ROOM** ♦ define the terms doubling time and population. Graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates.
	♦ develop a chronological understanding of the early history of the United States (early inhabitants to Reconstruction).	**COWS OR CONDOS?** ♦ analyze the reasons for agricultural land becoming urban area on the fringes cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model **LESS ELBOW ROOM** ♦ define the terms doubling time and population. Graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Classify byproducts and benefits of tress by playing a vocabulary development game. **WHAT WILL THE LAND SUPPORT?** ♦ observe the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ recognize cause-and-effect relationships and multiple causes of events in United States history.	**COWS OR CONDOS?** ♦ recognize the effects of agriculture land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method.

2.20 Historical Perspective (cont'd)		**DON'T USE IT ALL UP** ♦ recognize the strain on natural resources by participating in a sponge demonstration symbolizing human resource consumption. Demonstrate the effects of a growing population on available natural resources through real-life examples. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Recognize the effect of differing growth rates on population size. **TILL WE OR WON'T WE** ♦ recognize the importance of topsoil and soil resources. Investigate how soil preparation and tillage techniques affect soil erosion and water runoff. Compare soil tillage techniques throughout history. **WHAT WILL THE LAND SUPPORT?** ♦ recognize the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ examine the impact of significant individuals and groups in early United States history.	**COWS OR CONDOS?** ♦ Explain and analyze the reasons for agricultural land becoming urban area on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model. Identify and debate issues associated with urbanization. **GALA FIESTA JAMBOREE** ♦ examine the history and cultural differences in special celebrations. Research harvest festivals and other celebrations, focussing on the purpose, geographic location, and history. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Recognize the effect of differing growth rates on population size.

2.20 Historical Perspective (cont'd)		**TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Play a vocabulary development game using classification of byproducts and benefits from trees. **WHAT WILL THE LAND SUPPORT?** ♦ examine the impact of the early settlers using natural resources. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ examine the impact of significant individuals and groups in early United States history.	**COWS OR CONDOS?** ♦ Explain and analyze the reasons for agricultural land becoming urban area on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model. Identify and debate issues associated with urbanization. **GALA FIESTA JAMBOREE** ♦ examine the history and cultural differences in special celebrations. Research harvest festivals and other celebrations, focussing on the purpose, geographic location, and history. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Recognize the effect of differing growth rates on population size. **TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Play a vocabulary development game using classification of byproducts and benefits from trees. **WHAT WILL THE LAND SUPPORT?** ♦ examine the impact of the early settlers using natural resources. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.

2.20 Historical Perspective (cont'd)	♦ analyze the social, political, and economic characteristics of eras in American history to Reconstruction (Land and People before Columbus, Age of Exploration, Colonization, War of Independence, Young Republic, Westward Expansion, Industrialism, Civil War).	**WHAT WILL THE LAND SUPPORT?** ♦ examine the impact of the early settlers on natural resources. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ recognize the significance of geographical settings and natural resources on historical perspective and events in early United States history.	**COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **TILL WE OR WON'T WE** ♦ recognize the importance of topsoil and soil resources. Conduct experiments simulating rain on a field, investigate how soil preparation and soil tillage techniques affect soil erosion, and water runoff. Compare soil tillage techniques throughout history.
	♦ examine the impact of technological advances on early United States history.	**COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization on agricultural land using a problem solving method. **TILL WE OR WON'T WE** ♦ recognize the importance of topsoil and soil resources. Conduct experiments simulating rain on a field, investigate how soil preparation and soil tillage techniques affect soil erosion, and water runoff. Compare soil tillage techniques throughout history.
	♦ understand the development of democratic thought in early America.	**COWS OR CONDOS?** ♦ recognize the effects of agriculture land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method.

2.20 Historical Perspective (cont'd)		**TILL WE OR WON'T WE** ♦ discuss the importance of topsoil and soil resources. Compare soil tillage techniques and the effects of farming and ranching on the land.
2.19 Geography	♦ examine patterns of human movement settlement, and interaction in early American history and investigate how those patterns influenced culture and society in the United States.	**COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **GALA FIESTA JAMBOREE** ♦ examine the history and cultural differences in special celebrations. Research harvest festivals and other celebrations focussing on the purpose, geographic location, and history. **TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Play a vocabulary development game using classification of byproducts and benefits from trees. **WHAT WILL THE LAND SUPPORT?** ♦ explore the patterns of the early settlers. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ explore reasons behind patterns of human settlement across the United States that resulted in the diverse cultures of the United States.	**COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **GALA FIESTA JAMBOREE** ♦ examine the history and cultural differences in special celebrations. Research harvest festivals and other celebrations focussing on the purpose, geographic location, and history. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Recognize the effect of differing growth rates on population size.

2.19 Geography (cont'd)		**WHAT WILL THE LAND SUPPORT?** ♦ explore the patterns of the early settlers. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ examine how early United States history was influenced by the physical environment.	**COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **DON'T USE IT ALL UP** ♦ recognize the strain on natural resources by participating in a sponge demonstration symbolizing human resource consumption. Demonstrate the effects of a growing population on available natural resources through real-life examples. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Recognize the effect of differing growth rates on population size. **TILL WE OR WON'T WE** ♦ discuss the importance of topsoil and soil resources. Conduct experiments simulating rain on a field, investigate the role of technology in preventing soil erosion and water runoff. Compare the effects of farming and ranching on the land. **TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Examine the origin of the wood products and what effect the use of trees has on the environment. **WHAT WILL THE LAND SUPPORT?** ♦ explore the patterns of the early settlers. Model the concept of carrying capacity by playing a board game and examine the limitations of natural resources in selecting homestead sites.

	♦ investigate how Americans used technology, especially in early American history, to modify the environment.	**TILL WE OR WON'T WE** ♦ discuss the importance of topsoil and soil resources. Conduct experiments simulating rain on a field, investigate the role of technology in preventing soil erosion, and water runoff. Compare the effects of farming and ranching on the land. **TRASH BASHING** ♦ identify solid waste while learning importance of reducing, reusing, and recycling. Develop plans to change personal behavior in order to reduce solid waste in landfills.
2.18 Economics	♦ relate the concept of scarcity (imbalance between unlimited wants and limited resources) to the development of the United States as it applies to individuals, societies, and governments.	**COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **DON'T USE IT ALL UP** ♦ recognize the strain on natural resources (renewable and nonrenewable) and offers suggestions to help conserve these resources. Introduction to the effect that a growing population has on the environment. **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Recognize the effect of differing growth rates on population size. **TILL WE OR WON'T WE** ♦ discuss the importance of topsoil and soil resources to satisfy human wants. Compare soil tillage techniques and the effects of farming and ranching on the land. **TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Examine the origin of the wood product and what effect the use of trees has on the environment.

2.18 Economics (cont'd)	♦ recognize that government regulation impacts the economy in decisions about productive resources (e.g., natural, human, human-made).	**TO WHOM IT MAY CONCERN** ♦ identify and research a controversial issue. Analyze and compile information to form an opinion about the issue. Write a business letter expressing your concerns to a group or organization. **TRASH BASHING** ♦ identify solid waste while learning importance of reducing, reusing, and recycling. Develop plans to change personal behavior in order to reduce solid waste in landfills.
	♦ understand how the desire to earn profits influenced the establishment and growth of economic institutions in early United States history.	**IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. **TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Play a vocabulary development game using classification of byproducts and benefits from trees. Examine the wood industry and explore the many industry's which rely on wood products.
2.14-2.15 Government and Civics	♦ understand how the American political system developed through examining colonial roots of representative democracy, reasons for creating an independent country, and purposes of government.	**IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates.
	♦ investigate the political process established by the U.S. constitution, including a system of separation of power with checks and balances and division of power among the states and national government.	**TO WHOM IT MAY CONCERN** ♦ research an issue in history that was decided based on the influence of a vocal, mobilized, and informed citizenry. Compose a letter voicing a concern to an elected official.

2.14-2.15 Government and Civics (cont'd)	♦ examine the rights and responsibilities of individuals in American society by analyzing democratic principles (e.g., liberty, justice, individual human dignity, and the rule of law) as expressed in historical events, historical documents (e.g., the Bill of Rights, Declaration of Independence, U.S. Constitution), and American society.	**LESS ELBOW ROOM** ♦ define the terms doubling time and population. Graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **TO WHOM IT MAY CONCERN** ♦ identify and research a controversial issue. Analyze and compile information to form an opinion about the issue. Write a business letter expressing your concerns to a group or organization.
2.16-2.17 Culture and Society	♦ examine how culture in the United States has been influenced by language, literature, arts, beliefs, and behavior of people in America's past.	**COWS OR CONDOS?** ♦ explain the reasons for agricultural land becoming urban area on the fringes of cities in the United States. Analyze the cultural beliefs of urban and rural people. **EXPRESSION CONNECTION** ♦ explore how farming connects agriculture, environment, diverse cultures and people, by playing a vocabulary word game. Develop a poetry project using connections to agriculture, environment, and culture. **GALA FIESTA JAMBOREE** ♦ examine the history and cultural differences in special celebrations. Research harvest festivals and other celebrations, focussing on the purpose, geographic location, and history. **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. Explore the many uses of agriculture on a day to day basis. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates.

2.16-2.17 Culture and Society (cont'd)		**WHAT WILL THE LAND SUPPORT?** ♦ explore the patterns of the early settlers. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ investigate how social institutions addressed human needs in early United States history.	**BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions where grain crops are grown. Examine the role that grain crops have played in United States history. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **WHAT WILL THE LAND SUPPORT?** ♦ consider how population growth affects land scarcity. Model the concept of carrying capacity by playing a board game. Discover the effects of change on the land throughout time.
	♦ analyze social interactions among diverse groups and individuals in United States history.	**EXPRESSION CONNECTION** ♦ explore how farming connects agriculture, environment, diverse cultures and people, by playing a vocabulary word game. Develop a poetry project using connections to agriculture, environment, and culture**.** **GALA FIESTA JAMBOREE** ♦ examine the history and cultural differences in special celebrations. Research harvest festivals and other celebrations, focussing on the purpose, geographic location, and history. **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. Explore the many uses of agriculture on a day to day basis.

2.16-2.17 Culture and Society		**LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **WHAT WILL THE LAND SUPPORT?** ♦ examine the impact of the early settlers on natural resources. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦analyze social interactions, including conflict and cooperation, among individuals and groups in United States history.	**COWS OR CONDOS?** ♦ explain the reasons for agricultural land becoming urban area on the fringes of cities in the United States. Analyze the cultural beliefs of urban and rural people. **GALA FIESTA JAMBOREE** ♦ examine the history and cultural differences in special celebrations. Research harvest festivals and other celebrations focussing on the purpose, geographic location, and history. **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **WHAT WILL THE LAND SUPPORT?** ♦ consider how population growth affects land scarcity. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.

What are the effects of changes in population and agriculture productivity on our future?

8th Grade Science/Social Studies

Academic Expectations	Correlations to the Program of Studies	Sample Activities
2.1 Scientific Ways of Thinking and Working	**SCIENCE** **Students will** **Scientific Inquiry** ♦ identify and refine questions that can be answered through scientific investigations combined with scientific information. ♦ use appropriate equipment (e.g., barometer), tools (e.g., meter sticks) techniques (e.g., computer skills), technology (e.g., computers), and mathematics in scientific investigations. ♦ use evidence (e.g., computer models), logic, and scientific explanations. ♦ design and conduct different kinds of scientific investigations to answer different kinds of questions. ♦ communicate (e.g., write, graph) designs, procedures, and results of scientific investigations. ♦ review and analyze scientific investigations and explanations of other students. **All *Program of Studies* scientific inquiry bullets are included in this guiding question.**	**BANKING ON SEEDS** ♦ explore the critical role that seeds have played through history. Compare the use of seeds by people in the past, present, and in the future. Create a scientific experiment that involves labeling seed parts, gathering, planting, and storing seeds for a seed bank. **TILL WE OR WON'T WE?** ♦ Construct experiments simulating rain on a field. Investigate how soil preparation and soil tillage techniques affect soil erosion and water runoff.

2.1 Scientific Ways of Thinking and Working (cont'd)	**Earth/Space Science** ♦ investigate the structure of the Earth system (e.g., lithosphere, rock cycle, water cycle, weather, climate).	**TILL WE OR WON'T WE?** ♦ construct experiments simulating rain on a field. Investigate how soil preparation and soil tillage techniques affect soil erosion and water runoff.
	♦ analyze Earth's history (e.g., Earth processes, catastrophes, evidence for changes).	**TILL WE OR WON'T WE?** ♦ discuss the importance of topsoil and soil resources. Construct experiments simulating rain on a field. Investigate how soil preparation and soil tillage techniques affect soil erosion and water runoff.
2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time	**Life Science** ♦ analyze reproduction (e.g., asexual, sexual) and heredity (e.g., genetic information, inherited traits).	**BANKING ON SEEDS** ♦ analyze the critical role that seeds have played through history by comparing the use of seeds by people in the past, present, and in the future. Create a scientific experiment that involves labeling seed parts, gathering, planting, and storing seeds for a seed bank.
	♦ investigate and analyze populations and ecosystems.	**ALMOST SIX BILLION AND STILL GROWING!** ♦ graph historical and projected world populations. Analyze how natural disasters, disease, and war affect death and birth rates which affect population growth and doubling time. **DON'T USE IT ALL UP** ♦ introduce the effects of a growing population has on the environment. Draw conclusions from a study involving natural resources (air, water, plants, animals, and soil.) Graph the earth's total water supply and investigate the strains on natural resources. **LESS ELBOW ROOM** ♦ define the terms "doubling time" and population. Graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates.

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time (cont'd)	**Life Science (cont'd)**	**PIECING TOGETHER POPULATION PATTERNS** ♦ analyze population patterns and other vital statistics for countries around the world. Develop a presentation about a country's population statistics and the effects of population growth on food, economics, and natural resources. **WHAT WILL THE LAND SUPPORT?** ♦ investigate the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game.
	♦ analyze diversity and adaptions (e.g., changes in structure, behaviors, or physiology).	**BANKING ON SEEDS** ♦ analyze the critical role that seeds have played through history by comparing the use of seeds by people in the past, present, and in the future. Create a scientific experiment labeling seed parts, gathering, planting, and storing seeds for a seed bank. **LESS ELBOW ROOM** ♦ define the terms "doubling time" and population. Graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Classify byproducts and benefits of tress by playing a vocabulary development game.
	Applications/Connections ♦ use scientific inquiry and conceptual understanding to design technological solutions (e.g., zippers, ballpoint pens) to problems.	**TILL WE OR WON'T WE?** ♦ discuss the importance of topsoil and soil resources. Construct and conduct experiments simulating rain on a field, investigate how soil preparation and soil tillage techniques affect soil erosion, and water runoff.

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time (cont'd)	**Applications/Connections (cont'd)** ♦ recognize how science is used to understand changes in populations, issues related to resources, and changes in environments.	**ALMOST SIX BILLION AND STILL GROWING!** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death and birth rates affect population growth and doubling time. **BANKING ON SEEDS** ♦ recognize the critical role that seeds have played through history by comparing the use of seeds. Create a scientific experiment that involves labeling seed parts, gathering, planting, and storing seeds for a seed bank. Explore the importance of seed banks and the diversity of seed crops. **COWS OR CONDOS?** ♦ analyze the reasons for agricultural land becoming urban area on the fringes of cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model **DON'T USE IT ALL UP** ♦ recognize the effects of a growing population has on the environment. Draw conclusions from a study involving natural resources (air, water, plants, animals, and soil.) Graph the earth's total water supply, investigate the strains on natural resources (renewable and nonrenewable), and offer suggestions to help conserve these resources. **LESS ELBOW ROOM** ♦ define the terms "doubling time" and population. Graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **NAIL BY NAIL, BOARD BY BOARD** ♦ investigate the origin of building materials and categorize them according to the natural resource from which they originate. Predict the materials for which a building might be constructed in the future.

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time (cont'd)		**PIECING TOGETHER POPULATION PATTERNS** ♦ analyze population patterns and other vital statistics for countries around the world. Develop a presentation about a country's population statistics and the effects of population growth on food, economics, and natural resources. **TRASH BASHING** ♦ identify solid waste while learning importance of reducing, reusing, and recycling. Develop plans to change personal behavior in order to reduce solid waste in landfills. **WHAT WILL THE LAND SUPPORT?** ♦ observe the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game.
	♦ examine the role of science in explaining and predicting natural events (e.g., floods, earthquakes, volcanoes).	**ALMOST SIX BILLION AND STILL GROWING!** ♦ graph historical and projected world populations. Analyze how natural disasters, disease, and war affect death and birth rates which determine population growth and doubling time.
	♦ use science to evaluate the risks and benefits to society for common activities (e.g., riding on airplanes, choice of habitation).	**ALMOST SIX BILLION AND STILL GROWING!** ♦ graph historical and projected world populations. Analyze how natural disasters, disease, and war affect death and birth rates which determine population growth and doubling time.
	Applications/Connections (cont'd) ♦ describe the effects of science and technology (e.g., television, computers) on society.	**TILL WE OR WON'T WE?** ♦ discuss the importance of topsoil and soil resources. Construct experiments simulating rain on a field. Investigate how soil preparation and soil tillage techniques affect soil erosion and water runoff.

2.2-2.6 Patterns, Systems, Scale and Models, Constancy, and Change Over Time (cont'd)	♦ demonstrate the role science plays in everyday life and explore different careers in science.	**NAIL BY NAIL, BOARD BY BOARD** ♦ find the origin of building materials and categorize them according to the natural resource from which they originate. Identify occupations involved in the building industry. **TREE-MENDOUS** ♦ identify and categorize characteristics and uses of trees. Classify byproducts and benefits of tress by playing a vocabulary development game.
	♦ recognize that science is a process that generates conceptual understandings and solves problems.	**BANKING ON SEEDS** ♦ recognize the critical role that seeds have played through history by comparing the use of seeds. Create a scientific experiment that involves labeling seed parts, gathering, planting, and storing seeds for a seed bank. Explore the importance of seed banks and the diversity of seed crops. **COWS OR CONDOS?** ♦ Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model. Identify issues associated with urbanization. **TILL WE OR WON'T WE?** ♦ discuss the importance of topsoil and soil resources. Construct and conduct experiments simulating rain on a field, investigate how soil preparation and soil tillage techniques affect soil erosion, and water runoff. **TRASH BASHING** ♦ identify solid waste while learning importance of reducing, reusing, and recycling. Develop plans to change personal behavior in order to reduce solid waste in landfills.

2.20 Historical Perspective	**SOCIAL STUDIES** ♦ use a variety of tools (e.g., primary and secondary sources, data, artifacts) to explore the interpretive nature (how perceptions of people and passing of time influence accounts of historical events) of United States history.	**ALMOST SIX BILLION AND STILL GROWING!** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine birth rates which determine population growth and doubling time. **COWS OR CONDOS?** ♦ analyze the reasons for agricultural land becoming urban area on the fringes cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem-solving model **LESS ELBOW ROOM** ♦ define the terms "doubling time" and population. Graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **PIECING TOGETHER POPULATION PATTERNS** ♦ examine population patterns and other vital statistics for countries around the world. Develop a presentation including a country's population statistics and the effects of population growth on food, economics, and natural resources.
	♦ develop a chronological understanding of the early history of the United States (early inhabitants to Reconstruction).	**ALMOST SIX BILLION AND STILL GROWING!** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine birth rates which determine population growth and doubling time. **LESS ELBOW ROOM** ♦ define the terms "doubling time" and population. Graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates.

2.20 Historical Perspective (cont'd)		**PIECING TOGETHER POPULATION PATTERNS** ♦ examine population patterns and other vital statistics for countries around the world. Develop a presentation including a country's population statistics and the effects of population growth on food, economics, and natural resources. **WHAT WILL THE LAND SUPPORT?** ♦ observe the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ recognize cause-and-effect relationships and multiple causes of events in United States history.	**ALMOST SIX BILLION AND STILL GROWING!** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine how birth rates affect population growth and doubling time. **COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Recognize the effect of differing growth rates on population size. **PIECING TOGETHER POPULATION PATTERNS** ♦ recognize the effects of population growth on food, economics, and natural resources. Examine population patterns and vital statistics for the United States and other countries. **TILL WE OR WON'T WE?** ♦ recognize the importance of topsoil and soil resources. Investigate how soil preparation and tillage techniques affect soil erosion and water runoff. Compare soil tillage techniques throughout history.

2.20 Historical Perspective (cont'd)		**WHAT WILL THE LAND SUPPORT?** ♦ recognize the relationship between population growth and environmental effects. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ examine the impact of significant individuals and groups in early United States history.	**ALMOST SIX BILLION AND STILL GROWING!** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine how birth rates affect population growth and doubling time. **COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **LESS ELBOW ROOM** ♦ define the terms "doubling time" and population. Graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates.. **TILL WE OR WON'T WE?** ♦ discuss the importance of topsoil and soil resources. Construct and conduct experiments simulating rain on a field, investigate how soil preparation and soil tillage techniques affect soil erosion, and water runoff. **WHAT WILL THE LAND SUPPORT?** ♦ examine the impact of the early settlers using natural resources. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.

2.20 Historical Perspective (cont'd)	♦ analyze the social, political, and economic characteristics of eras in American history to Reconstruction (Land and People before Columbus, Age of Exploration, Colonization, War of Independence, Young Republic, Westward Expansion, Industrialism, Civil War).	**ALMOST SIX BILLION AND STILL GROWING!** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine how birth rates affect population growth and doubling time. **WHAT WILL THE LAND SUPPORT?** ♦ examine the impact of the early settlers on natural resources. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ recognize the significance of geographical settings and natural resources on historical perspective and events in early United States history.	**ALMOST SIX BILLION AND STILL GROWING!** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death and birth rates affect population growth and doubling time. **COWS OR CONDOS?** ♦ recognize the effects of agriculture land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization on agricultural land using a problem solving method. **PIECING TOGETHER POPULATION PATTERNS** ♦ recognize the effects of population growth on food, economics, and natural resources. Examine population patterns and vital statistics for the United States, and other countries. **TILL WE OR WON'T WE?** ♦ recognize the importance of topsoil and soil resources. Conduct experiments simulating rain on a field, investigate how soil preparation and soil tillage techniques affect soil erosion, and water runoff. Compare soil tillage techniques throughout history.

2.20 Historical Perspective (cont'd)	♦ examine the impact of technological advances on early United States history.	**ALMOST SIX BILLION AND STILL GROWING!** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine how birth rates affect population growth and doubling time. **COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **PIECING TOGETHER POPULATION PATTERNS** ♦ recognize the effects of population growth on food, economics, and natural resources. Examine population patterns and vital statistics for the United States, and other countries.
	♦ understand the development of democratic thought in early America.	**ALMOST SIX BILLION AND STILL GROWING!** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine how birth rates affect population growth and doubling time. **PIECING TOGETHER POPULATION PATTERNS** ♦ recognize the effects of population growth on food, economics, and natural resources. Examine population patterns and vital statistics for the United States, and other countries.
2.19 Geography	♦ examine patterns of human movement settlement, and interaction in early American history and investigate how those patterns influenced culture and society in the United States.	**ALMOST SIX BILLION AND STILL GROWING!** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine how birth rates affect population growth and doubling time.

2.19 Geography (cont'd)		**COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **PIECING TOGETHER POPULATION PATTERNS** ♦ investigate the effects of population growth on food, economics, and natural resources. Examine population patterns and vital statistics for the United States, and other countries.
	♦ examine how early United States history was influ enced by the physical environment.	**ALMOST SIX BILLION AND STILL GROWING!** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine how birth rates affect population growth and doubling time. **COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Recognize the effect of differing growth rates on population size. **PIECING TOGETHER POPULATION PATTERNS** ♦ examine population patterns and other vital statistics for the United States and other countries around the world. Develop a presentation including population statistics, and the effects of population growth on food, economics, and natural resources. **WHAT WILL THE LAND SUPPORT?** ♦ explore the patterns of the early settlers. Model the concept of carrying capacity by playing a board game and examine the limitations of natural resources in selecting homestead sites.

- investigate how Americans used technology, especially in early American history, to modify the environment.

ALMOST SIX BILLION AND STILL GROWING!

- graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine how birth rates affect population growth and doubling time.

COWS OR CONDOS?

- recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method.

LESS ELBOW ROOM

- graph and compute historical and projected human population growth. Recognize the effect of differing growth rates on population size.

PIECING TOGETHER POPULATION PATTERNS

- examine population patterns and other vital statistics for the United States and other countries around the world. Develop a presentation including population statistics and the effects of population growth on food, economics, and natural resources.

TILL WE OR WON'T WE?

- recognize the importance of topsoil and soil resources. Conduct experiments simulating rain on a field, investigate how soil prepara tion and soil tillage techniques affect soil erosion, and water runoff. Compare soil tillage techniques throughout history.

WHAT WILL THE LAND SUPPORT?

- explore the patterns of the early settlers. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.

2.18 Economics	♦ relate the concept of scarcity (imbalance between unlimited wants and limited resources) to the development of the United States as it applies to individuals, societies, and governments.	**COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Recognize the effect of differing growth rates on population size. **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. **PIECING TOGETHER POPULATION PATTERNS** ♦ examine population patterns and other vital statistics for the United States and other countries around the world. Develop a presentation including population statistics and the effects of population growth on food, economics, and natural resources. **TILL WE OR WON'T WE?** ♦ discuss the importance of topsoil and soil resources to satisfy human wants. Compare soil tillage techniques and the effects of farming and ranching on the land.
	♦ recognize that government regulation impacts the economy in decisions about productive resources (e.g., natural, human, human-made).	**COWS OR CONDOS?** ♦ recognize the effects of agricultural land becoming urban areas on the fringes of American cities. Explore alternative approaches to reducing the rate of urbanization of agricultural land using a problem solving method. **PIECING TOGETHER POPULATION PATTERNS** ♦ examine population patterns and other vital statistics for the United States and other countries around the world. Develop a presentation including population statistics and the effects of population growth on food, economics, and natural resources.

		PIECING TOGETHER POPULATION PATTERNS ♦ examine population patterns and other vital statistics for the United States and other countries around the world. Develop a presentation including population statistics and the effects of population growth on food, economics, and natural resources. **TO WHOM IT MAY CONCERN** ♦ identify and research a controversial issue. Analyze and compile information to form an opinion about the issue. Write a business letter expressing your concerns to a group or organization.
2.14-2.15 Government and Civics	♦ understand how the desire to earn profits influenced the establishment and growth of economic institutions in early United States history.	**IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture.
	♦ understand how the American political system developed through examining colonial roots of representative democracy, reasons for creating an independent country, and purposes of government.	**LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates.
	♦ investigate the political process established by the U.S. constitution, including a system of separation of power with checks and balances and division of power among the states and national government.	**TO WHOM IT MAY CONCERN** ♦ identify a controversial issue and research the issue. Analyze and compile information to form an opinion about the issue. Write a business letter written to an individual, group, or organization expressing your concerns.
	♦ examine the rights and responsibilities of individuals in American society by analyzing democratic principles (e.g., liberty, justice, individual human dignity, and the rule of law) as expressed in historical events, historical documents (e.g., the Bill of Rights, Declaration of Independence, U.S. Constitution), and American society.	**IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. Explore the many uses of agriculture on a day to day basis.

2.14-2.15 Government and Civics (cont'd)		**LESS ELBOW ROOM** ♦ define the terms doubling time and population. Graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **TO WHOM IT MAY CONCERN** ♦ identify and research a controversial issue. Analyze and compile information to form an opinion about the issue. Write a business letter expressing your concerns to a group or organization.
2.16-2.17 Culture and Society	♦ examine how culture in the United States has been influenced by language, literature, arts, beliefs, and behavior of people in America's past.	**ALMOST SIX BILLION AND STILL GROWING!** ♦ graph historical and projected world populations. Discuss how natural disasters, disease, and war affect death rates. Examine how birth rates affect population growth and doubling time. **BREADS AROUND THE WORLD** ♦ identify types of bread along with the cultures in which they developed. Locate the countries or regions where grain crops are grown. Examine the role that grain crops have played in United States history. **COWS OR CONDOS?** ♦ explain the reasons for agricultural land becoming urban area on the fringes of cities in the United States. Analyze the cultural beliefs of urban and rural people. **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. Explore the many uses of agriculture on a day to day basis. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates.

2.16-2.17 Culture and Society (cont'd)		**PIECING TOGETHER POPULATION PATTERNS** ♦ examine population patterns and other vital statistics for the United States and other countries around the world. Develop a presentation including population statistics and the effects of population growth on food, economics, and natural resources. **TILL WE OR WON'T WE?** ♦ discuss the importance of topsoil and soil resources. Conduct experiments simulating rain on a field. Explore the history of no-till farming and the soil management practices that have been used through out time. **WHAT WILL THE LAND SUPPORT?** ♦ explore the patterns of the early settlers. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.
	♦ investigate how social institutions addressed human needs in early United States history. .	**IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. Explore the many uses of agriculture on a day to day basis. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **WHAT WILL THE LAND SUPPORT?** ♦ examine the impact of the early settlers on natural resources. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.

2.16-2.17 Culture and Society (cont'd)	♦ analyze social interactions among diverse groups and individuals in United States history.	**BANKING ON SEEDS** ♦ analyze the critical role that seeds have played through history. Compare the use of seeds by people in the past, presents and in the future. **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture. Explore the many uses of agriculture on a day to day basis. **LESS ELBOW ROOM** ♦ graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates. **PIECING TOGETHER POPULATION PATTERNS** ♦ investigate population patterns and other vital statistics for countries around the world. Develop a presentation about a country's population statistics. Discover the effects of population growth on food, economics, and natural resources. **WHAT WILL THE LAND SUPPORT?** ♦ consider how population growth affects land scarcity. Model the concept of carrying capacity by playing a board game. Discover the effects of change on the land throughout time.
	♦ analyze social interactions, including conflict and cooperation, among individuals and groups in United States history.	**COWS OR CONDOS?** ♦ explain the reasons for agricultural land becoming urban area on the fringes of cities in the United States. Analyze the cultural beliefs of urban and rural people. **IT ALL STARTS WITH A** ♦ describe factors that make agriculture the nation's leading industry. Chart and graph information found from surveys conducted about the importance of agriculture.

2.16-2.17 Culture and Society (cont'd

LESS ELBOW ROOM

- graph and compute historical and projected human population growth. Simulate progressive crowding and observe behavior that crowding generates.

TO WHOM IT MAY CONCERN

- identify and research a controversial issue. Analyze and compile information to form an opinion about the issue. Write a business letter to an individual, group, or organization expressing your concerns.

WHAT WILL THE LAND SUPPORT?

- consider how population growth affects land scarcity. Model the concept of carrying capacity by playing a board game and discover the effects of change on the land throughout time.